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TALK ABOUT SEPTEMBER.

"There is a beautiful spirit breathing now
Its mellow richness on the clustered trees."

SEPTEMBER is, perhaps, the most beautiful month of the twelve. It has not the east winds of spring, the intense heat of summer, nor the cold northerly blast of later autumn. Yet a shadow rests upon its beauty, because we begin to see signs of decay. We know that the sun is turning his back upon us, and that we must soon bid farewell to the verdure that has charmed us for a little while. A few yellow leaves are, perhaps, all the positive evidences of decay yet visible, but a general sereness has diminished the rich green of summer, and banished that freshness which will return no more for many months. But then it is never wise to let the storms and inclemencies that are *going to be*, cloud the sunshine that *is*.

For further consideration we have the fact that summer did not depart till her work was done. Her bright suns and pleasant rains gave us plenty of cherries, currants, berries, &c., &c., and left the premises for the months of the garnered sheaves, and gathered grain—of apples, pumpkins and other delightful things which glad the hearts of industrious Yankees. And autumn will finish the work summer laid out for her, for Nature is, in the main, very reliable. She will not bring us a cold, stern winter, without first supplying us with life's comforts. Our vegetables and fruits shall ripen, our pigs and turkeys grow fat, and then we can retire to our dens (figuratively) and defy "rude Boreas" and all his train.

The changes of the seasons are, on the whole, a pleasant variety to most people. Even a perpetual spring would become a monotonous affair after a while. But how different are the voices of autumn, and the voices of spring—both delightful in their way. Already we miss many voices from the full chorus that saluted us a few months ago. The frog, whose voice came from every bog and meadow and brook in the warm twilights of April, has said his say, and retired from the stump, like a sensible orator, when he has expressed his sentiments. Or, if we do hear him at all, it is but a faint peep—he has evidently lost the zeal which characterized his first efforts. The robin, having seen her family through their state of babyhood, has settled quietly down to a matter-of-fact existence. The blackbirds, who, while planning their summer's work, are perfectly tumultuous, have long since ceased to hold their caucuses on every tree. The whip-poor-will is not heard much after July comes in—but he can hardly be said to belong to the full choir of which we have spoken, as he only comes abroad in the night when all but owls and people with unquiet consciences are sleeping. Where does he go, and why does he leave so early?

We have spoken of the voices of spring. Now what are the voices of the autumn? They are few and generally mournful. An occasional note from a solitary bird, the caw of the crow as he flaps lazily through the air—the tree-toad predicting rain with more certainty than the weather-vane that points East on your barn. These are the sounds we hear on a quiet autumn day. The chirp of the grasshopper and cricket are saying, too, "Summer's gone—summer's gone!"

Our fields and gardens, also, bear witness of the same thing. Instead of the modest but fragrant little flowers, that came when the snow first

went away,—or the roses and syringas of a later date, we have now beds of flaunting, gaudy, but almost scentless phloxes—the dahlia, marygold and aster. Then the cardinal, whose scarlet blossoms made the meadow so gay in August, has had its day, and the clematis has changed its white blossoms for a feathery mass of little curling tendrils.

At home, too, we insensibly glide into a different way of life. Instead of gathering about the great front door, or sitting out on the piazza of an evening, we come to the bright parlor lamp, and say to each other that the evenings are growing chilly, although nobody likes to insinuate that it is time for fires yet. It doesn't come amiss, though, if we can get a seat near the kitchen stove, accidentally, while the tea is being prepared.

There is something very pleasant in this reassembling of a family group around a common centre, after the more wandering habits of hot weather, and the social delights of autumn and winter evenings go far to compensate for the loss of the delicious romance of summer.

As a farming community, we have had, on the whole, our usual prosperity during the present season, although the disease among the cattle has caused pretty serious inconvenience in some localities. But we hope that time, and a better acquaintance with the disease, will remedy the evil.

There have been, perhaps, about the usual number of events capable of furnishing subjects of *talk* at stores and depots, and the corners of the streets. There was the tornado at the West which carried cows and horses through the air as if they had been so many insects—and the storm in this vicinity which did *not* "spare that tree" on Boston Common,—a comet with a tail about as large as that of a good sized rat, and a partial eclipse of the sun. So much in the way of meteorology and astronomy.

Then, to descend to a lower sphere, there have been the Presidential nomination, a visit from those diminutive specimens of humanity, the Japanese, and the sailing of Dr. HAYES toward that Unknown Sea, and the unknown regions that may lie beyond, the search of which has already cost so much in money and human life. Success to the brave navigator.

When the stray items of another summer are gathered up, may pleasant returns from him and his crew brighten our recording page!

FINE DIFFUSION OF GOLD.—Professor Faraday supposes that if a leaf of gold, which is only 1-280,000 of an inch thick, and weighs about 8.2 of a grain, yet covers a superfices of nearly ten square inches, were diffused through a column of solution having that base, and 2.7 inches in height, it would give a ruby fluid equal in depth of tint to a good, red rose; the volume of gold present being about the one five hundred thousandth part of the volume of fluid.—*Timbs' Curiosities of Science.*

For the New England Farmer.

CUTTING AND CURING OF HAY.

There is no part of the farmer's employment in the month of July of more importance than this. When and how grass shall be cut for the making of hay, are inquiries that will be likely to be answered, according to the education and practice of those who answer. I have supposed that grass should be cut when grown, so as to produce the greatest weight when cured—say between the bloom, and the maturing of the seeds. If suffered to remain longer than this, it becomes hard and wiry, and loses that aromatic flavor which is the beauty of new-mown nay.

My attention has been drawn to this point, by the assertion of gentlemen of experience, that it is best to let grass stand until fully ripe, before it is cut, because it will then be quicker and easier made into hay. I cannot concur in this opinion.

How shall it be cut, with a scythe, or with a mower, by horse-power? I had supposed it to have been demonstrated, again and again, that full one-half the expense of cutting can be saved by the use of a mower of approved construction. I know nothing to the contrary of this, unless it be, that the expense of fitting up mowers will be disproportionate to the wants of small farmers. Where this is so, several farmers, in the same neighborhood, may unite in the owning of a machine; and have a common operator to guide it.

A machine can be used for the cutting of ten acres per day, without unreasonable fatigue to man or beast. This would require the labor of ten men—as work is usually done with a scythe. I therefore unhesitatingly approve of dispensing with the use of man-power, when it can be done so advantageously as in the cutting of grass.

Essex Co., Mass., July, 1860. *

REMARKS.—So mote it be, Mr. *. *Prejudice* is more than a "monster of frightful mien"—for if it would frighten some persons into a sense of their own interests, it would be well. But it does not, for they worry along for years fighting directly against their own comfort and interest, merely because they are determined the world shall go no faster than they do.

COLIC IN HORSES.

A correspondent of the *Farmer's Advocate*, (E. S. Phelps, Jr.,) gives the following recipe for colic in horses:

"I knew a horse taken with colic while on a tread-wheel to a carding machine, so that the owner thought he could not live. He got three veterinary surgeons, and they did what they could, and all decided the horse must die. The man's wife, who believed and practiced hygiene, from the time the horse was taken, tried to persuade her husband to use a wet bandage, but he insisted

it would do no good. After all had given up that the horse could no longer live, by her entreaties, (the doctor saying it could do no good or hurt,) he took a thick bed-comforter, bound it around the horse, went to the well and drew water, and poured it on till thoroughly soaked. It steamed like a pot boiling. In less than fifteen minutes from the time he commenced the watering process the horse was up and eating, to the great surprise of the horse doctor, who knew he could not live. The horse did good service afterwards. This recipe I gave several years ago, and it was copied into most—as I was told by an editor—of the agricultural, and many other papers of the United States. Many have tried and proved it. Try it, brother farmer.

THE CROPS OF 1860.

The general evidence from all quarters is to the effect that the crops of 1860 will be abundant. Of course, in some sections of the country the farmer has not been so fortunate, and particular crops show the effects of the drought, the storm, or the insect—but such cases are merely the exception which prove the general rule.

In New England the hay crop is generally short, from one-quarter to one-half less than the average. Fruit, grain and vegetables promise unusually well. We present a few extracts from our exchanges in various parts of the country.

The Lewiston Falls (Me.) *Journal* states that on new fields in Lewiston and adjoining towns there will be nearly as much hay cut this year as there was last, but on old fields there will not be more than one-half or two-thirds as much. On both old and new fields the hay is heavier according to bulk, and of a much superior quality. It will be secured in better order than for a number of years. Grain, corn, potatoes and other crops look remarkably well, considering the long drought. In Somerset county grass looks remarkably well. Wheat sowed from the 15th to the 30th of April goes clear of the weevil, and will produce from sixteen to thirty bushels of first quality grain per acre, if storms do not injure it. Corn never looked better. On Friday and Saturday nights of last week there was a slight frost in many places in the State of Maine.

The Burlington (Vt.) *Phœnix* says that the hay crop in that county promises to be greater than that of last year, and that was larger than any one preceding it for a number of years. Since the middle of June the weather has been unusually propitious for its increase, and although late, the growth in moist, uncut fields still continues. Corn and oats are exceedingly thrifty, and the crops of both will be large.

The Rochester (N. Y.) *Advertiser* says the farmers are now securing an abundant harvest of Genesee wheat. All concur in saying that the yield is not only handsome, but the quality is remarkably fine. The Oswego *Palladium* says that many pear and apple trees in that vicinity are struck with blight.

The wheat and corn crop of Ohio promises to be large. The reports are pretty much like those from Illinois and Indiana. The papers complain of a blight in the apple trees in certain sections of that State. It resembles the fire blight, which affects the pear, and seems to fall only upon trees that are full of fruit. The grain crop of 1860 now bids fair to overtop any of previous years, even the bountiful harvest of 1857, when the respective crops were as follows:

Corn	82,555,186 bushels.
Wheat	25,397,614 "
Oats	25,000,000 "
Other small grains	3,000,000 "
Aggregate	135,952,800

This aggregate, large as it is, will probably be increased in 1860. The Cincinnati *Gazette* thinks the wheat and corn crop may be more, the oats not as much.

A private letter, recently received from one of the largest South Carolina planters, says: "We are in a terrible drought and heat here. It is settled that the corn crop of the South will be very short. As to cotton, greatly damaged now, no one can say for a month to come what it may do. I am now mainly a corn planter. Six weeks ago I expected to make 70,000 bushels; I will now compound for 40,000. I expected, also, 600 bales of cotton, but now only count on 400, but may make a little more."

From every quarter of Canada the prospects of the coming harvest are most cheering. The only exception to the productiveness of crops is said to be that of hay, which is light; but even of that the quantity is expected to be much larger than the yield of last year.

On the whole, we consider the reports exceedingly encouraging, and another proof, if that were wanted, of the unfailing fulfilment of the promise that, "while the earth remaineth, seed time and harvest shall not fail."

THE PENNSYLVANIA OIL SPRINGS.—Less is said, perhaps, than formerly, about the newly-discovered oil springs in western Pennsylvania, but the oil is there, and all the original local excitement; and when railroads shall have been built through the region, and arrangements made for working this source of incalculable wealth, the new branch of industry will assume no mean proportions. There are now within the radius of a mile from Franklin, Pa., over one hundred oil springs, in only eight of which pumps have been put to work. Some of these yield forty barrels a day, while the general average of all the wells is twelve barrels. But barrels cannot be got, and when got the facilities for getting to market are of the worst kind, so very little is being done, now, more than to prospect for new bores and hold on to the old ones. Proprietors will not sell at any price, and calculate their springs freely at anywhere from $10,000 to $100,000. The oil is of good quality, and worth in its crude state thirty cents a gallon in New York.

DIVISION OF LABOR IN FARMING.

Within the recollection of middle-aged people, great changes have taken place in the household industry of farmers' families. Many who now buy their own, and much of their children's clothing ready-made, were dressed in their childhood with garments that were spun and woven, cut and made, by their mothers and sisters, with a few days' assistance, perhaps, on the winter coats, by the tailoress of the neighborhood. The transfer of the loom and spinning-wheel from the family to the factory is very differently regarded by different individuals. Some think that the result of this change will be the gradual loss of that industry, tact and independence, which has given character to the people of New England, while others take a more hopeful view of the subject.

Whether we lament or rejoice over this change, it can be regarded but as a manifestation of that "spirit of the age," an evidence of that tendency of our times, which merges the individual in the mass, which substitutes associated for solitary labor, and thus makes even the baleful atmosphere of the factory more attractive than the pure air of heaven. Hence we are not surprised to see by the census returns, that, while our cities and villages are rapidly increasing in population, many thinly settled portions of the country are gaining but slowly, some are stationary, and not a few are actually decreasing in population.

Farming has been generally regarded as necessarily an individual or solitary business. The hand that fells the trees, must drive the team, thresh the grain, guide the plow, swing the scythe, sell the produce, buy stock, dress the pigs, and do up all the various jobs and chores, in doors and out, that fall to the lot of the farmer.

The division of labor, which, anomalous as it may sound, must be called the first principle of association, and the use of machinery, which may be termed its second principle, has been supposed to be inapplicable to farming, except to a very limited extent.

These limits are, however, extending every year. At the West, it is common for one individual to equip a "breaking-up plow," and devote himself exclusively to this one branch of farming, during the entire season. Another goes the rounds with a patent reaper, and some one else with a threshing-machine. Several individuals in Massachusetts have purchased machines, and have done up the mowing for their neighbors, during the past two or three seasons. It is also a common practice near large towns, for milkmen to do the marketing of this article for their neighbors.

We find, however, in the *Ohio Farmer*, an account of a new application of this principle. Mr. Lysander Pelton, of Gustavus, Trumbull county, Ohio, has established a cheese factory, where the curd from more than two hundred dairies is manufactured into cheese. He has erected suitable buildings, with sufficient shelving for three hundred and fifty tons of cheese. In April, he contracts with all the farmers within a district of eight or ten miles square, who are willing to sell their curd, which is collected by Mr. P. and which employs from six to eight teams. The agreement is that the curd shall be sweet, and that ten pounds of it shall make seven pounds of cheese. "For two years past the price has been 4½ cents per pound net." The curd from each dairy is separately tested at the factory, and its amount of shrinkage, which is various, determined by experiments; if over 30 per cent., the excess is deducted; if less, it is added. The curd is sliced and ground fine by machinery, and the whole establishment is arranged in factory style, and with strict regard to convenience and neatness, and great pains are taken to retain the best possible flavor. Mr. Pelton contracts for his cheese directly with shippers, and it is stated that "no one who has dealt in his cheese has lost on it," although country merchants in Ohio generally complain of losing money by their operations in this article. The last season, Mr. P. contracted for all the cheese he could make, not to exceed three hundred tons, but in consequence of the drought he does not expect to exceed two hundred tons.

The writer of the article which we have thus condensed, believes that these two hundred dairymen would realize less money from the sale of their cheese if manufactured at home, than they now do from the sale of the curd; thus making a clear saving of the labor and care of manufacturing, preserving and selling them—a saving which no dairy-woman will call a trifle. The reason for this belief is, that if manufactured in these various households, there would be not only two hundred different sizes and shapes of cheese, but as many qualities, which, when carried to market, a few at a time, would be sold for less money than Mr. Pelton pays for the curd.

Of itself, this Ohio speculation may be a small affair; but, as suggesting the possibility of applying to agriculture those principles of combination, of labor-saving machinery, and of the division of labor, which have done so much for manufactures, we regard Mr. Pelton's cheese factory as one of those signs of the times that deserve a passing notice and a passing thought.

LAND MEASURE.—Every farmer should have a good measure, a light stiff pole, just sixteen and a half feet long, for measuring land. By a little practice he can learn to step a rod in five steps, which will answer very well for ordinary farm work. Ascertain the number of rods in width and

length of a lot you want to measure, and multiply one into the other, and divide by one hundred and sixty, and you have the number of acres, as one hundred and sixty square rods make a square acre. If you wish to lay off an acre square, measure thirteen rods on each side, and you have the thing very near.

SOUTHERN AND NORTHERN CORN-FIELDS.

A correspondent of the *Scientific American* writing from Kentucky communicates the following, which may interest our agricultural friends:

"It is a curious fact that the Yankees, with all their ingenuity, have never learned to plow a straight furrow, while every negro in the South will lay off a field, however large, without having a bend of a foot in a single row. The furrows are not only straight but parallel, the last one in a field a quarter of a mile square, always coming out parallel with the fence. A Virginia farmer, 60 years of age, told me that he never had a short row in one of his cornfields in his life. In the new States, whenever you see crooked rows you may know you are among people from New York, New England and Ohio, and whenever the rows are straight, you will find that it is a settlement of Southerners. This accuracy is owing to the method of laying off the ground. If it is desired to have the rows three and a half feet apart, two stakes are cut, each seven feet long, one for each edge of the field. One of these is set perpendicularly seven feet from the end of the field, and the plowman, proceeding to the opposite edge, makes a mark there also, seven feet from the end, and runs his furrow straight to the standing stake, operating in a direction to keep the unfurrowed portion of the field at his right hand. Returning, he splits the seven feet strip with a furrow, thus having round—or, as the Southerners say, 'turning haw'—at both edges of the field. The failure of Northerners to learn this simple art is mainly owing to the inveterate conservatism characteristic of farmers—their fondness for walking in the paths of their fathers—but it is also partly to be attributed to their mode of guiding their horses. I think that for driving a team attached to a wagon, the two or four reins used at the North are preferable to the plan of riding the near-wheel horse and guiding the team by a single line on the near leader, which is in universal use at the South. But for plowing, the single line is decidedly better than anything else that I have ever seen."

CREDIT.—The *Cheshire Republican*, published at Keene, N. H., will undoubtedly feel happier by crediting us with the article in its issue of July 19, entitled "A Few Words about Haying." We like to see our children going about the world doing good, but always with the badge of their paternity upon them. We lay no claim to the article entitled *"How to Mow,"* hitched on to the breeches of our own bantling!

To remove mildew from linen or cotton goods, dip the articles in soft soap, and spread them in the sun, on the grass.

For the New England Farmer.

LETTER FROM THE SANDWICH ISLANDS.

MESSRS. EDITORS:—From Kilanea we pushed on for Kau the next station. We rode along near the sulphur banks, down the west side of the crater, past the burning lake which we visited yesterday, and for nearly twenty miles travelled through a country blighted with the overflowing scourge of lava which has destroyed at least seven-tenths of this noble island. We then found a better country, and staid over night at the house of Frederick Lyman, a worthy son of Rev. D. B. Lyman, of Hilo. Mr. Lyman has one of the best places I saw on Hawaii, a grazing farm of some two thousand acres in the district of Kau. The next day we rode through the district, passing the wheat fields of the last year. Some two thousand bushels were here gathered. Of this I may speak again, ere I am through.

In 1829 I passed through this district. Everything was then primitive Hawaiian, and little improvement. Now, Christian civilization exhibits its fruits in meeting-houses, school-houses, and in better habitations than formerly; in roads; in increased industry; wheat raising, cattle raising, better clothing, &c. Kau, however, is a hard district, exceeding stony as a whole, and fit chiefly for pasturage. Goats are being raised in great numbers, chiefly for their hides and tallow, and pulu from the fern is plenty in the mountains, and is becoming an article of commerce. Rev. W. C. Shipman is the pastor of the church.

From Kau we pushed on for Kona. We rode some thirty-five miles the first day over an exceedingly rough country. All lava, and nearly all the aa or clinkers, small lava stones. Near night we reached the sea and took a canoe. The sea was smooth and the mountain breeze took us on delightfully, so that at dawn of day we had entered Kealakeakua Bay, and we landed and rode to the residence of Rev. John D. Paris, at Orange Hill, South Kona. His people, Hawaiians, are mostly at the sea, the bay where we landed, and at the coast which we passed during the night in the canoe. His principal meeting-house is at Kealakeakua, near the place where Opukahaia, (Obookiah, as written in English,) used to live. With Mr. Paris we visited Honaunau, the ancient place of burial of kings, and a large ancient city of refuge. Mr. Paris' residence is about two miles from Kealakeakua, and only one mile from Kaawaloa, where Cook fell in 1779. This spot we visited, as also his monument, which, at a cost of some two or three dollars, perhaps, not more, his brave countrymen have erected to his memory.

We found quite a number of foreign residents on Orange Hill, the place of Mr. J. D. Paris. From his house there is a very good road for six or eight miles. The land on each side of this road is owned by foreigners, and every half mile you see a very decent framed or stone house built by a foreigner. These men are cultivating their land, raising coffee, oranges and other things. Till lately the prospect was flattering that the coffee crop would be large, but much of this year's crop has been destroyed by an insect which causes both the orange and coffee to blight. There is a strip of land, including this Orange Hill, which may become some of the most valuable on Ha-

waii. It may be, (it has not been measured,) forty miles long, and from three to five broad. It has been overflown with lava, and is now very stony; but so much of it has been decomposed that there is a rich soil. It cannot be plowed, but fruit trees grow luxuriantly, and native produce and corn and beans do well. If the place is preserved from the fires of Pele, we shall hear from South Kona again ere long.

Wishing to see one more exhibition of Pele's doings, we rode to Kiholo, thirty miles from Mr. Paris'. As we left the settlement of Kona, the roads became exceedingly bad where they were not covered with grass spread over the lava stones, and trodden down. The last six or eight miles, the road lay through fields of lava horrible to behold. Now, for a mile or two, we pass through a region which was overflown, I judge, one hundred and fifty years ago. It is a perfect wilderness of lava grown grey with age, decomposing on the upper side, but judging from old fissures it must be from ten to fifteen feet deep. Again we enter another belt of a mile or two of a more recent age, but ancient and wilder, if possible, than the last. Not an inch of ground, not a spoonful of dirt, is seen over all these horrid fields. And so for miles, we found belt after belt, each of different age, till we reached Kiholo, and stood upon the lava caused by the eruption of 1859, still smoking, sending up steam and vapor. We walked over what had been a fine fish-pond filled with mullet; now nothing but a huge pile of lava slabs. A little further, and we came upon the lava stream now running on a level, and now rushing down a fall of a foot or two. Approaching one of the streams, I thrust my stick into it, and drew out some of the matter for a specimen. The matter was of the consistency of thick tar, more adhesive perhaps. This Kiholo is about three miles from Wainanalii, the fishing village where the molten river just reached the ocean, Jan. 31st, 1859. It has been piling up its matter as it has cooled, till it has reached the place where we saw it. In the evening we took canoe and were rowed a mile and a half to a place where the stream leaps into the Pacific. The wind was light and southerly, driving the steam and gases from us. Our canoe approached to within sixty feet where we sat and drank in the grandeur of the scene. There were three streams rushing down a precipice of some twenty-five feet high. We judged that one of these streams was two fathoms wide, the others one fathom each. At times the flow into the sea was regular and the commotion of the water and the ascent of the steam constant. Again, the lava, just at the place of falling into the water, became obstructed, a large mass collected, till the stream above pressing hard, the pile became detached, and tons perhaps fell in at once. At such times, the boiling, roaring foaming of the maddened waters was terrible, while the clouds of steam which ascended upward reflecting the light from the burning river added greatly to the grandeur and terror of the scene; I retired from this exhibition, quite satisfied with what I had witnessed of Pele's doings—grateful, too, I hope, that no such burning, desolating river is seen at present on Maui. Well may you, too, be grateful that no such destroying element is eating your fair and fruitful fields.

Let me now tell you of our wheat crop in 1859, and of our troubles from another source. We had our usual troubles with the cut-worm and the caterpillar. These being ended, the wheat did well, was harvested and threshed, crop abundant, —grain good. The wheat was taken down to our little harbor, and sold till 20,000 bushels had been taken to the mill of Honolulu, and a considerable quantity stored at the sea. Just then the flouring company sent peremptory orders to their agent to cease purchasing wheat. And thus some 5000 bushels remain on our hands. It has caused much suffering among my people, and there seems no little cause of complaint as the company have all along urged the farmers to put in the wheat, and did not suggest any limits to the quantity to be raised. Considerable of this surplus wheat has been sold for fifty cents per bushel. We need more competition in the sale of flour, and I trust that by another year there will be another flouring mill, so that bread will be cheaper. For a time I thought there would be less wheat sown another year, but as there is so much on hand, I now think the quantity will be as great as last year. Some think even greater.

There is much complaint, just now, of the hard times. The poor success of whalers for the last year or two, is one cause, I suppose. One of our wheat growers, a man from Georgia, U. S., was basely murdered on the night of January 1, of this year. He was an intelligent and industrious man. The murderers have not been convicted, though three young Hawaiians are under arrest for trial. We have had a very dry season, and our fields are still suffering.

Yours, with much respect, J. S. GREEN.
Makawao, Maui, January, 1860.

HOW MUCH HAY FOR THE HORSE?

This is a question which we have seen proposed in some of the journals of the day. If put in a general manner, you might, with as much propriety, ask how much *horse* for the hay? The quantity of hay for the horse must depend on many contingencies—such as the size of the horse, the proportion of oats or other provender which he receives, his general health, &c. &c.

A Wisconsin man has sent a communication to the Wisconsin *Farmer*, on this subject. He says he has had experience in keeping horses, and tried careful experiments in regard to feeding them. He thinks that on an average *five* pounds at a time, and three feeds per day, with twelve quarts of oats per day, or their equivalent in shorts, is enough for a good sized horse. He considers "*a good sized horse*" one that will weigh 1150 lbs. He recommends cut feed as being vastly preferable to any mode of feeding horses. He also contends that horses so fed have no *cough* or *heaves*, which he believes to be inseparable from feeding with clover or dusty hay, unless it be cut and well dampened.

Those who have tried the method, say that a feed of carrots, say a peck once per day, to horses, will be better than large allowances of oats, or, in other words, a few carrots will be better to take the place of part of the oats usually given. The reason assigned for this is the following: Carrots contain an ingredient called *Pectic* acid, which acid is a great aid to the gastric juices in digest-

ing the food of the horse. When this is supplied in the case of feeding with carrots, both the hay the horse eats and the provender is more easily and more thoroughly digested.

We all know that horses that labor hard, whether in slow or quick draft, must have more concentrated feed than hay, in order to keep up their strength and animation. Still it will not do to feed them wholly on concentrated feed. Their stomachs and digestive organs were made to receive and digest bulky food, like that of grass, hay, straw and the like, and they cannot do without it. In order, therefore, to insure the best of health, they must have fibrous or bulky matter to give that distension to their stomachs their nature requires, and this, as a matter of course, must depend upon the size of the horse, or on the size of the stomach and digestive organs. Hence a strictly definite answer to the question, how much hay for a horse? must be answered by each individual horse for himself.—*Maine Farmer.*

CUTTING AND CURING GRAIN.

Experiments have pretty well settled the fact that wheat should be cut while the grain is in the state called *doughy*. The conclusion was, indeed, reached several years since in regard to wheat, but it has, by the experiments of Voelcker, been clearly shown to be applicable to oats; and it is also known to be equally applicable to Indian corn. At first, it was feared by some that there would be a great shrinkage of the grain cut in this stage, which would amount to absolute loss. It is proved, however, that the sap of the stems of straw is sufficient to perfect the grain, and that the grain, under such circumstances even possesses some valuable properties which it has not when it remains uncut till dead ripe.

Mr. Colman states that he found by many inquiries in England that the "best rule for harvesting is not when the stalk below the head has changed color, and the circulations have consequently ceased, but when the grain, though it has ceased to yield any milk upon pressure, is yet soft." The advantages of cutting at this stage are briefly given as follows: "Wheat cut early affords more grain, yields less bran, makes better flour, wastes less in gleaning, gives better straw, and enables the farmer to do the work more leisurely."

C. W. Johnson, in the *Farmer's Encyclopædia*, observes—"Grain, if not reaped until the straw is wholly yellow, will be more than ripe, as the ear, generally, except in the late seasons, ripens before the entire of the straw, and it is observable that the first reaped usually affords the heaviest and fairest sample. The indications of ripeness in wheat are few and simple. When the straw exhibits a bright golden color, from the bottom of the stem nearly to the ear, or when the ear begins to bend gently, the grain may be cut. But as the whole crop will not be equally ripe at the same time, if, on walking through the field and selecting the greenest heads, the kernels can be separated from the chaff when rubbed through the hands, it is a sure sign that the grain is then out of its milky state, and may be reaped with safety; for although the straw may be green to some distance downwards from the ear, yet if it be quite yellow from the bottom upwards, the grain then wants no further nourishment from the earth, and if properly harvested will not shrink. These tokens will be found to sufficiently indicate the ripeness of wheat, barley and oats; but that of rye arises from the straw losing some of its golden hue, and becoming paler."

Some of the most valuable experiments which have been reported on this subject, are those of Mr. Hannam, in the 12th and 13th volumes of the *Quarterly Journal of Agriculture.* The trials were made under his own direction, and with great care. He cut samples of wheat at five different times, as follows:

No. 1, was cut a month before fully ripe.
" 2, " three weeks " "
" 3, " two weeks " "
" 4, " two days " "
" 5, " when fully ripe.

Of these lots, 100 pounds of grain of each yielded as follows:

No.	*Flour.*	*Seconds.*	*Bran.*
1	75 pounds	7 pounds	17 pounds.
2	76 "	7 "	16 "
3	80 "	5 "	13 "
4	77 "	7 "	14 "
5	72 "	11 "	15 "

Thus it appears that No. 3, which was cut two weeks before it was fully ripe, was superior to the other lots; giving more per bushel than No. 5, (cut when fully ripe,) by 6½ pounds of flour, and a gain of about fifteen per cent. on the flour of equal measure of grain; 100 pounds of wheat of No. 3, makes 80 pounds of flour, while 100 pounds of No. 5, yields 72—showing an average of eight per cent. in favor of No. 3. In grinding, it was found that No. 5 ground the worst—worse than No. 1. There were in No. 5 a greater quantity of flinty particles which would not pass the bolt, than in any of the other lots. The bran from No. 5 was also much thicker and heavier than that of No. 3.

Mr. Hannam concludes, therefore, that in cutting wheat two weeks before it is fully ripe, there is a gain of fifteen per cent. of flour upon equal measures, a gain of fourteen per cent. in the weight of straw, and a gain of 7s. 6d. sterling in the value of every quarter (560 lbs.) of wheat. Many trials have been made in this country in cutting wheat at various stages, and the results agree, generally, with those above given.

But when grain is cut before it is ripe, it is necessary that it should undergo a process of curing, before it can be safely stored in the barn or stack. Hence it is usual to place the sheaves in shock for several days, according to the state of weather, or the degree of moisture in the straw. But it sometimes happens that loss is occasioned, more or less, by the sprouting of the grain while it stands in shock—especially in warm, showery, or damp weather. To guard, as well as possible, against loss from this cause, the shocks should be put up in the best manner.—*Albany Cultivator.*

UNITED STATES AGRICULTURAL SOCIETY.—The annual exhibition of this Society will be held at Cincinnati, commencing Sept. 12, and continuing to the 20th. The premium list amounts to $20,000. No cattle will be received on account of the pleuro-pneumonia disease, but large premiums will be offered for horses, machinery, steam fire-engines, &c.

AGRICULTURAL SOCIETY.

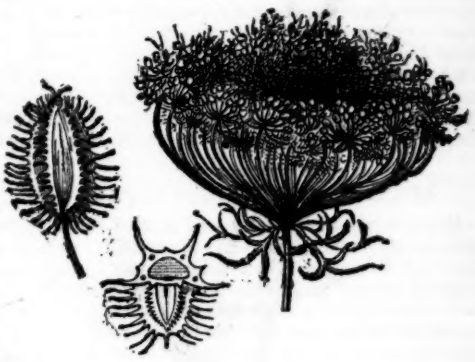
Through the kindness of Dr. O. W. TRUE, we have before us a nicely printed pamphlet of fifty-two pages, giving an account of the transactions of the *North Franklin Agricultural Society* in Maine, for the year 1859. It also contains a brief history of the Society, from its beginning in 1852, giving the names of the persons who have delivered the Annual addresses, and of those persons who have been elected as members of the State Board of Agriculture. The pamphlet is also illustrated with good specimens of cattle, sheep and swine. The address last year was given by ANDREW C. PHILLIPS, Esq., and is an excellent production, full of sound teachings and interesting and important facts. After speaking of the fertility of the soil of the county, of the clear mountain air, of the rich intervales and crystal waters, of the lakes studded with islands, and of the waterfalls and forests about them, he says:

"With all this, are you discontented—your thoughts wandering to some distant State or Territory, and your imagination captivated with visions of rich prairie lands in the West? Consider, first of all, the probable or even possible loss of health from the change, for which no worldly gain is an equivalent. Don't forget the shady side of the picture—that distance lends enchantment.—Contrast your present comfortable homes, with their commodious arrangements, with a diminutive log house, its walls plastered with mud, with its stick chimney, its solitary room answering the manifold purpose of cook-room, sleeping-room, sitting-room and parlor, with a multitude of swine standing guard at the front door, grunting for admission, and improving every opportunity to effect it. Would you, who have been accustomed to have your cattle comfortably housed in the winter, enjoy seeing them, without a roof to protect them, stand shivering beside a hay-stack, vainly endeavoring to shield themselves from those cold, piercing, biting winds, that, unobstructed by forests, or a single elevation of land, blow over the western prairies? Call your children about you, and look upon their young faces, now radiant with the glow of health, and think if it would be a pleasing sight to mark those cheeks grow pale, those lips livid and those eyes hollow, under the effects of impure water and miasmatic air. Don't forget your social privileges, your neighbors, some of them perhaps your own kindred, all at least Americans. Don't forget your churches and schools—all your present means of intellectual and moral culture. Lastly, don't forget—for the dollar is, after all, the grand consideration—don't forget, when you compare the amount of products, to compare prices and facilities of market, and the cost of what you are obliged to purchase."

THE TEA PLANT.—The progress of acclimatizing the tea plant, so far as heard from, is favorable, and there is reason to believe that it can be grown in the open air south of the northern line of North Carolina and Tennessee. Eighteen thousand plants have been sent into the Southern region, and eight thousand more have been distributed to persons in the Northern States, owning green-houses, as objects of curiosity.

THE WILD CARROT.

This is a variety of the common carrot, cultivated in the fields and gardens, and a poor thing it is; much like the boy, neglected, crowded down



and abused; he is a boy to be sure, but a dreadful poor specimen of the genus. The wild variety is extensively naturalized in New England, and threatens to become a troublesome pest on our farms. We have seen it growing on gravelly road-sides, and even extending itself into the hard, beaten track, much as the neglected boy pushes his vices into the proprieties of life.

When this plant makes its appearance on the premises of the careless farmer, it soon multiplies so as to become a source of annoyance to the whole neighborhood. It should be carefully destroyed before it matures its seeds. Darlington's pleasant book on Weeds and Useful Plants will give the reader a more full account of this, and the ox-eye daisy.

A VALUABLE TABLE.—The following table, which will be found valuable to many of our readers, we republish at the request of a friend:

A box 24 inches by 16 inches square and 28 inches deep, will contain a barrel—5 bushels.

A box 24 inches by 16 inches square and 12 inches deep will contain half a barrel.

A box 26 inches by 15.8 inches square and 8 inches deep will contain 1 bushel.

A box 12 inches by 11.2 inches square and 8 inches deep will contain 1 peck.

A box 8 inches by 8 inches square and 4.2 inches deep will contain 1 gallon.

A box 4 inches by 8 inches square and 4.8 inches deep will contain a half-gallon.

A box 4 inches by 4 inches square and 4.1 inches deep will contain 1 quart.

THE OX-EYE DAISY---LEUCANTHEMUM.

This plant is well known all over New England by the name of *White-Weed*. It has become common on many farms, so that the fields present a surface of white as though covered with snow. It is not considered valuable for fodder, either in a green or dry state, for even when feed is short in the pastures, the daisy stands untouched by the cattle, giving evidence that it is not palatable to them. It is a strong grower, and unless checked, will drive out most of the grasses we cultivate. It propagates itself rapidly, so that when it once has possession of a field, nothing short of plowing and cultivating a succession of crops will eradicate it.

Whenever it first appears in the fields, the farmer will do well to pull out every plant. In this way a few moments' labor each year will keep his premises free from the invasions of this showy, but as at present understood, worthless plant.

INDICATIONS OF THE APPROACH OF THE MILLENNIUM!—It would be strange, indeed, if there were not one sensible man in the world who is rich. That there *has been* one, is certain from the account of a *remarkable will* appended below. How strange it is that, in all the millions that have been bequeathed, scarcely a dollar, with very rare exceptions, has been appropriated to the encouragement of agricultural pursuits, or to teach the young the principles and practices of this important art!

It is quite certain, that the "good time" we have read and heard of so long, is at hand, it must be the foreshadowing of the millennium itself, an "era of good feeling," when *three hundred thousand dollars* are bequeathed by a single individual, "for the education in agriculture of indigent white children," in the city of New York. That man shall have an enduring monument in the hearts of our people, whether he has one of brass or not. But we must not keep the reader too long from the account of this

REMARKABLE WILL.—The will of Mr. John Rose, a retired merchant of New York, whose decease was announced some weeks ago, made a conditional bequest of $300,000 to the city of New York, for the education in agriculture of indigent white children. The condition is that a corresponding sum should be appropriated by the city, or raised by charitable contributions, for the purchase and support of a farm in the neighborhood of New York, to be devoted to the education and training to agricultural pursuits of pauper children. If this purpose be not carried out, the $300,000 goes to the American Colonization Society, for the deportation and support of free blacks in Liberia. The decedent was a bachelor, and a bachelor brother of large wealth is constituted his sole executor, with the remainder of his estate, about $550,000, placed in his charge for benevolent and charitable institutions. The only personal bequests are a gift of $20,000 to his executor, and $12,000 to another brother, now advanced in years. The whole value of the estate, principally in productive stocks, is reckoned at $880,000. The foundation of this large wealth was laid in one of the Southern cities.

For the New England Farmer.

THE COUNTRY FOR THE CHILDREN.

MESSRS. EDITORS:—I have been often tempted to write a few words for your highly prized paper, but have never found time, from the same cause that a farmer's wife complains of in the number of June 30, which I have just read. There is more truth in her remarks than every man is aware of, whether he is a farmer or not. Hard work, and a plenty of it, is the order of the day with a stirring farmer, but not the order of the night, as is often the case with the wife, who has but one pair of hands to do with, and one head to think what is to be done in the daily round of every day business. Still, I would not have my boys or girls brought up any where else for all the ease and luxury that any Boston lady enjoys; and why? you may ask. I will tell you. In the first place, it is much better for their health on a farm, and less trouble in finding something to keep them out of idleness, which is the parent of mischief. What if they don't get so much book learning or so much genteel education as their city cousins; their minds are kept more pure, whilst they are forming acquaintance with the cattle, pigs, poultry, birds and flowers, helping father take care of the farm, and mother cook, wash, iron,

make and mend, and make butter and cheese, all of which they should be early taught to do with grace on the farm. I once heard an aged lady say that it requires the wisdom of Solomon, the patience of Job and the goodness of God, to bring up a family just as they should be. I will say to our farmer's wife in Warner, N. H., that she has the right grit, and if she has the health which she needs, will see better days when the children get large enough to help her, if she teaches them as well as she can, that she cannot always do every thing; and if her husband does not appreciate her worth as he ought, he will sometime, if he lives.

A FARMER'S WIFE.

WATER PIPES.

For several months past we have had frequent inquiries as to what is the best pipe for conducting water for farm and domestic purposes. Some of these letters, making particular inquiries, we have answered at the time, thinking that, when a favorable opportunity offered, we would give a more extended reply to the general questions stated. Considerable prejudice has always existed against metal pipes, from the fact that iron rusts, and lead is known to give in some cases a poisonous quality to the water, which, after constant use for a length of time, undermines the health, and lays the foundations of a painful and lingering disease. Other metals have found a sufficient objection in their cost. Iron pipes coated on the inside with glass have been introduced, but are quite expensive in themselves, and occasion increased expenses from the difficulty of laying them. Cement pipes, made by coating sheet iron or tin pipes on the inside with cement, are not expensive, and in many cases have proved to be all that was desired. Pipes of hydraulic cement, made by moulding the cement around a rod of iron or wood, and then withdrawing the rod before the hardening of the cement, have also been recommended, and in cases where not much pressure has to be resisted, answer every purpose. Within a comparatively few years the multifarious applications of India rubber and gutta percha to domestic purposes have suggested their use for conducting water, and both materials are now manufactured into pipes for that purpose.

Having thus stated the most important kinds of pipe, we shall now proceed to express our views concerning them, and the reasons we have for entertaining them. For aqueducts, when the supply of water is to be conveyed from a spring or stream, we know of no pipe we should prefer to wood. Wood seldom, if ever, taints the water which passes through it, is easily procured, and if properly laid will last for a longer time than iron. In the country the expense attending it would be small, compared to other materials which would have to be transported from a distance. Logs for pipes should be used whole, the bore should be through the centre, or heart-wood, and in laying them, they should be placed at such a depth as to secure as uniform a temperature and state of moisture as is possible. This last is the great point to observe in laying wooden pipes. A depth of four feet in clayey or meadow land, and six feet, or even more, in sandy soil, is not more than is required to secure durability to the aqueduct, and if this is not observed the labor will have to be repeated at altogether too frequent intervals to be profitable. The old Jamaica pond aqueduct, which for many years supplied a portion of our city with water, and the one still in constant use, we believe, at Springfield, which was constructed by the late Charles Stearns, of that city, some twenty years ago, prove that when the conditions we have named are observed there is no material so valuable as wood for works of any size. Of course, for conveying water for the use of large cities, where millions of gallons are consumed daily, this material would be found entirely insufficient, and iron must be adopted. We intend our remarks to apply only to such works as are needed for single estates, or neighborhoods.

The objections to lead pipe are sustained by the evidence of our best chemists, and we should not make use of it where the water conveyed is to be used for drinking, or in the preparation of food.

The cement pipe made at Jersey City, N. J., has come into use to some extent. A correspondent of the *Farmer* writing from Middlefield, Ct., in 1856, says of this pipe, "I have the cement pipe, and see no reason why it should not last for centuries. It is made by coating the inside of a pipe made of sheet iron, or tin, with cement. This pipe is made in pieces of from six to ten feet in length, which are united when laid, and all is covered with cement two inches thick. If properly laid it is perfectly strong and tight at the joints, and will sustain a great amount of pressure." We have before us an unpublished letter of recent date, from another correspondent, who is an engineer, and has superintended the construction of works of this class, in which he says, "The towns of Plymouth and Pittsfield have extensive water works where the cement pipe is used with entire success, the water flowing through the pipes, which are from one-half an inch to twelve inches in diameter, as pure as if conveyed through solid stone."

But the principal demand for a pipe for conveying water seems to be for one that will be most profitable to use in short distances, and where not a large supply is needed; a pipe from an inch to an inch and a half, or two inches in diameter. For this purpose the new candidates

for public favor deserve a consideration. We are frequently asked whether India rubber or gutta percha will not give an unpleasant taste to the water conveyed through them. This may be the case for a few days or weeks, but we do not think it will continue for any length of time. These materials are both used to a great extent for purposes where metals have been found unsuitable, and we do not know that this objection has been proved against them. The natural elasticity of these substances is sufficient to allow them to expand and contract under the action of heat and cold, under almost any form of manufacture, so as to prevent all danger from bursting on account of freezing. Were we about laying a pipe for our own use, we should use one or the other of these materials.

The India rubber pipe made by the Boston Belting Company possesses several valuable qualities. A section of the pipe shows its construction to be as follows: Cloth heavily coated on both sides with rubber, is wound round some three or four times, and coated again on the inside and outside with pure rubber. This makes the thickness of the one inch pipe, about three-eighths of an inch, and having cloth for its basis, obviates all liability to flaws and weaknesses in its manufacture. It can be bent with ease into curves of small radius, making the labor of laying it upon uneven surfaces and around angles no more difficult than upon a level and straight course. The pipe seems to have nearly the same degree of elasticity in cold weather as in warm, so that there need be no resort to artificial heat when laying it in cold seasons. The gutta percha pipe possesses some of these qualities, but its sensitiveness to heat makes a great objection to its use. It also becomes very rigid under the action of severe cold, so that in our opinion there is danger of its being fractured at such times. It can never be safely exposed to the action of the sun or fire, and can never be used for conveying hot water. Its extreme lightness, and the ease with which it can be jointed when necessary, are much in its favor. Chemists have pronounced in favor of both these materials, as far as imparting any deleterious properties to the water is concerned, and both are worthy of trial from any one about laying a pipe for conveying water.

The cost of these two materials varies but little. The one inch rubber pipe costs twenty-four cents, the gutta percha twenty-five cents per foot, the former warranted to stand 200 pounds pressure to the inch, the latter tested to fifty pounds.

The cement pipe spoken of above, costs about twenty-five cents per foot for two inch pipe, when laid. But the pipe to be used,—wood, cement, India rubber, or gutta percha,—to secure the desired ends, and at the same time consult economy, must depend somewhat upon circumstances. To secure entire satisfaction, the object to be gained should be first fully understood; and we believe that the material which will most fully supply the requirements of the case, whatever it may be, and whatever its first cost, will prove to be the most economical.

For the New England Farmer.

FIGURES, AND A FARM.

Mr. Editor:—The problem of "P. J.," in the monthly *Farmer* for March, so far as the figures have to do with it, is not a difficult one to solve. But the question, "Will said farm ever be paid for, from the farm?" I will answer, by saying, if he has been able to meet his annual payments and annual interest promptly through the hard times that farmers have met from 1852 to 1860, a reference to the following figures, showing the amount of each yearly payment of principal and interest, will give him high hope of success.

	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.
Principal,	$200	100	100	100	100	160	100	100
Interest,		129	123	117	111	105	99	93
Total,	$200	229	223	217	211	205	199	193
	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
Principal,	$100	100	100	100	100	100	100	100
Interest,	87	81	75	69	63	57	51	45
Total,	$187	181	175	169	163	157	151	145
	1868.	1869.	1870.	1871.	1872.	1873.		
Principal,	$100	100	100	100	100	150	2,350	
Interest,	39	33	27	21	15	9	1,449	
Total,	$139	133	127	121	115	159	3,799	

"P. J." will notice that he will have paid $3,799, principal and interest, in 1873, $1,449 of which is interest. April 1, 1860, he will have paid of principal $1,000; interest, $864.

I like the reply of Ed. Emerson to "C. L. W.," in relation to the 9½ acre farm, and he might have added among his other arguments against a small farm, that the expense of the family is the same on a small as on a large farm. Let me have plenty of "elbow room" to farm it profitably.

Goshen, Vt., March, 1860. O. W. D.

APPLES FOR FEEDING.

For cattle, sweet apples are found to be an excellent substitute for roots — promoting both growth and health.

For swine, nothing equals an apple pie, either for relish, or for fattening power. The pig is not very dainty about his pie, however. If you merely cook the apples, and stir in a little bran, he won't refuse the dish; substitute shorts, or corn-and-cob-meal, or ground oats, or buckwheat, and it will suit his palate, and pile on the fat amazingly. And, for finishing up a piece of pork, an apple pudding, thickened with good corn-meal, is as far ahead of hard corn as the corn is of raw pumpkins.

Pork made with apples is sweeter, and quite as free from shrinking, as the "corn-fed."

But to the question—"Would it be profitable to raise sweet apples for feeding to cattle or swine?"

Altogether so—unless the apples will bring in market much more than they cost to feed the hu-

mans on! True, it takes time to start an orchard and bring it into bearing; but then the outlay is small, and the ground may be profitably used for other crops while the trees are growing. When once in bearing condition, what other crop will pay as well as apples? For swine, they may be made to save half the corn used in fattening pork. For cattle, they are worth nearly, or quite as much as roots. Plant out the apple trees; they must prove profitable.—*Genesee Farmer.*

LOSS OF THE CUD.

Literally, there can be no such thing as "loss of the cud." Ruminating animals are never furnished with an appendage so ridiculous as a cud, to be used as "gum," in the mouth of a schoolboy, which if lost, must be supplied, with an artificial "cud;" as if the operations of nature must be suspended until this prepared artificial panacea is supplied, to take the place of the natural "cud lost."

By a slight investigation of anatomy and habits of ruminating animals, this very common delusion would be dispelled, and the slight understanding of the "cud," the causes of its "loss," and the means necessary to be used to restore it, would be more clearly understood.

By ruminants, or ruminating animals, we mean those having a complex stomach with four cavities so disposed as to allow of ruminating, or the act of at once laying in a large stock of food, slightly chewed, and afterward to return it to the mouth, and there more thoroughly masticate it, and fit it for digestion. Digestion is always preceded by this action in this order of mammals, and they are exclusively confined to a vegetable diet. Now if debility, loss of appetite, disease of the stomach and digestive organs, or sickness from any other cause ensue, this order of nature may for the time be suspended, and the animal have no need to perform the act of rumination. The ordinary operations of a healthy animal are not called into requisition. Hence, we hear of "loss of cud." The only "remedy" for this "loss" lies in restoring the animal to health, and if we know what is the disease, we can the more certainly apply the "remedy." But all the "made cuds" that ever entered into the *materia medica* of quackdom can never compensate for the folly and ignorance of applying one.

The stomach of ruminating animals is especially organized for the performance of its peculiar functions. It consists of four distinct cavities, all communicating with a muscular canal at the termination of the *œsophagus*. Coarsely masticated food passes from the beginning of the muscular canal into the first cavity, called the *rumen*, or paunch. Water is received into the second cavity, called the *reticulum*, and almost exclusively occupies the honey-comb cells of that cavity, and is gradually mixed with the coarsely divided food which is undergoing mastication in the *rumen*. When this is sufficiently advanced, a portion of the mass is raised into a muscular canal, is there moulded into a ball, and by a spasmodic action of the muscles of the gullet is forced into the mouth, where it is perfectly masticated at leisure, mixed with saliva, and again swallowed. It now passes directly into the third recess called the *psalterium*. Here the superfluous fluid is absorbed, and the thoroughly subdivided mass passes gradually into the fourth recess, called the *abomasus*, where it is completely digested, and from which it passes off into the lesser intestines.

Ruminating is a most interesting process of nature, and it is a most pleasing study to observe and note in its manifold operations, and to witness the supreme satisfaction of a well-fed animal "ruminating," or elaborating by this wonderful provision of Providence,—the mastication of food by delugition, ejection and final swallowing—otherwise, "chewing the cud." When we become more thoroughly familiar with the beautiful economy of animated nature, and its most wonderful organization, we shall no more hear of the "loss of the cud," but will attribute the effects to their proper causes, and call things by their right names. —J. V. H. C., *in Gen. Farmer.*

THE IDYL OF A WESTERN WIFE.

BY ELLA FARMAN.

Straying here at dusk, I, a housewife merry,
Lean upon the fence and listen through the gloom,
Watch the sunset fade from yonder gleaming ferry,
Harking with my heart for Joe's light whistle home.

* * * * * * *

All so quaintly built, brown and low our house is:
Naught but simple-hearted honest folks are we,
But we live content as our own moss-roses,
Though the noisy world doth mind not Joe and me

Rustic king and queen of these rural riches;
Humming hives of bees, and many flocks and herds,
And a beautiful and fruitful orchard which is
Full of sweet, sweet clover grass, and nests of birds.

By a silver, broad, lone and silent river,
'Twixt the river and the mossy, ancient wood,
In our rustic house; and the wood-fowl ever
Crieth all day through this peaceful neighborhood.

By the summer's fair, greenest-kirtled fairies
In the woodbine's flowering, dark-leaved sculpture laid
In a cornice rare round our stoop; and there is
Love's own arbor seat and moon-paved promenade.

O'er it do the tall, clambering morning-glories
Spill at morn their dainty cups of perfumed dew;
There walk Joe and I with our household stories—
I and Joe, good farmer Joe, when day is through.

O, how happy we! through the summer evening walking,
As the happy ones of ancient Arcady!
O, how happy we!—rustic married lovers talking,
Though the noisy world ne'er heard of Joe and me.

* * * * * * *

Straying here at dusk, I, a housewife merry,
Lean upon the fence and listen through the gloom;
Watch the sunset fade from yonder gleaming ferry,
Harking with my heart for Joe's light whistle home.

N. Y. Evening Post.

OLD PEAS AND BEANS.—If you have any old peas or beans in your granaries, which have become mouldy, pour boiling water over them, and after drying them thoroughly, grind and give them to your swine. Treated in this manner, and especially peas, they constitute a most valuable and nutritious food for swine. But beans, unless *cooked* and mixed with other substances, are the most valuable for sheep.

GRADUAL DIMINUTION OF RAINFALL IN ENGLAND AND SCOTLAND.

In the January number of the *Valley Farmer* for 1859, we gave an article on the annual diminution of the fall of rain in the United States, the cause, and the probable effects upon the agricultural interests of the country, &c. In England, the annual fall of rain, in inches, is probably one-half less than it is in the United States, yet in England there are at least one-third more rainy days in a year than there are in the United States. But in the former country it only rains, while in this country it often pours. The causes that produce this effect in this country have been, comparatively, but a few years in operation, while in England and Scotland they have been for centuries. These changes are so marked, and the results so important, that the Scottish Meteorological Society offer a reward of £20 ($100) for the best essay on the following questions: 1. Whether the amount of rainfall in the western part of Europe, and particularly in Scotland, is less now than it formerly was. 2. Assuming this fact to be established, what are the most probable causes of it? With reference to the first of these questions, the Secretary of the Society, A. Keath Johnson, says:

"Notice may be taken of the popular belief that springs of water have been gradually diminishing, or altogether drying up, especially in arable districts; and the following statement in the report of the Registrar General for England, for the quarter ending June, 1859: 'The deficiency in the fall of rain from the beginning of the year, is 1¾ inch. The deficiency in the years 1854, 1855, 1856, 1857, 1859, amounting to the average fall of one year, viz., 25 inches. From a careful examination of the fall of rain (year by year) from the year 1815, it would seem that the annual fall is becoming smaller, and that there is but little probability that the large deficiency will be made up by excess in future years.' With reference to the second question, notice may be taken of the supposed effects of deep drainage, and deep culture of the soil, in raising the temperature both of soil and atmosphere, in lessening evaporation, and diminishing the condensation of vapor."

This is not only an interesting, but an important subject for investigation, and we hope that we may chance to meet with a copy of the prize essay when it is published, that we may compare the views with those we have expressed.

NATIVE CATTLE.

We have a breed of cattle in the Northern States which pass under the appellation of "native cattle," but there appears to be a stock in Texas better entitled to the name. A Texas paper says:

"We are informed by those most familiar with the facts, that these cattle were of uniform color, as much so as buffaloes—a black brown, approaching black; short glossy hair, beautiful turned horns, large in size, with broad chest and bodies, well-rounded quarters, and generally exhibiting excellent forms for beef and draft. The half-breed fully sustains this description, and is not only a valuable work-ox, but, when fat, would rank as a first class beef. One object in alluding to the subject, is to invite inquiry as to whether, if not too late, our common stock of cattle may not be improved by preserving this wild breed and crossing it. It is probable there are some still in this country in a domestic state. Another point of considerable interest, and one that we have on various occasions heard discussed without any satisfactory result, is, whence came this distinctive family of cattle, all of the same color and general exterior, which make them entirely different from the domestic stock of the United States, Mexico, and the Creoles of Louisiana, all of which are new to Texas."

EXTRACTS AND REPLIES.

FARM MACHINERY.

A good many men, and boys too, will give a hearty amen to your prayer for blessings on the *Mann* who invented the "Vegetable Weeder," if it comes up to the recommendation you seem disposed to give it. I hope it will be in the market before another season for weeding comes round. The "good time" seems to be coming for the farmer. Machines are almost daily brought to public notice intended to save the wear and tear of human muscle in farm labor. Mowers, reapers, ditch-diggers, rock-lifters, &c., are multiplying in all quarters, till there seems to be little hard work left to be accomplished by mere manual labor.

A friend at my side names a farmer of Grafton, who has imagined (though I do not think he has made any attempt to realize his imagination) a machine for milking cows, to be worked by the motion of the cow's tail. To the objection, that this could only be worked during the fly season, the same friend suggests the use of *artificial* flies! Here is a fine chance for mechanical genius. J. DOOLITTLE.

VERMIN IN THE POULTRY HOUSE.

In reading your last number of the monthly *Farmer*, I noticed a piece about hen-lice; and thinking that I could give a little information in regard to the extermination of these troublesome vermin, I take the liberty to reply to Mr. Reed's article. Last fall, having moved a short distance from the city, and taking a fancy to hens, I purchased two hens and a rooster. Finding that by good treatment they can be made to pay, I have since increased my flock to thirty. Having a barrel of lime which I had no use for, I thought it might be a good idea to sprinkle a little on the floor of my coop to make it white and clean, but I have since found that it not only serves that purpose, but others. It purifies the atmosphere, keeps the coop white and clean, and last, but not least, I think I can safely say that it keeps the poultry-house free from all vermin, for since I have used it, I have not had any trouble with my hens in regard to lice or other vermin. In flying from the roosts or nests it gets in amongst their feathers, which keeps them healthy and in good condition. A. P.

Westbrook, July, Me., 1860.

FARMING OPERATIONS IN ESSEX COUNTY.

I have recently seen Manny's and the Buckeye Mowers most successfully operated on the farms of Messrs. Ware and Merrill. Mr. W. has finished the cutting of his grass with Manny's, and as he holds and drives himself, his opinion is worthy of confidence. While looking at his mowing, I glanced at his extended fields of onions—several acres of which have been replanted with carrots, by reason of the ravages of the worm at the bottom. Some of them were still found operating. He hopes for a good yield of carrots though planted since July came in. The crop of grass is not large the present season—the cold and drought of the spring operated against its starting well. Never have I witnessed a more vigorous growth upon trees of every variety, and never have I seen the fields covered with an aspect more luxuriant. P

July 12, 1860.

SUPERPHOSPHATE FOR TURNIPS.

About the first of July, last year, I plowed about an acre and a quarter of old mowing land; soil, a sandy loam on the higher part, good strong loam lower down the slope, and running to the edge of a peaty swamp. Spread on 400 pounds of Coe's superphosphate of lime, harrowed it well, sowed four varieties of turnips, about one-half in rows with a seed-sower, and the other half broadcast and harrowed in. The season was dry for several weeks afterwards, but the seed came up well. When the young turnips had very slowly put out about four leaves, the tips of the leaves began to blight and became dry and crisp, and so continued throughout the season. At harvesting, the whole crop was not worth half the cost of the superphosphate. All the varieties of the turnip, on all the varieties of soil showed the same appearance of blight. This was my first experience with superphosphate of lime as a fertilizer for turnips; and I leave you to decide whether this effect should be attributed to the superphosphate, to the dryness of the season, or to some other cause.

Concord, July 9, 1860. MINOT PRATT.

IS FARMING PROFITABLE?

If Mr. Pinkham is not satisfied that farming is profitable, I would commend to his attention the following facts. About ten years ago, a lady in this vicinity was left a widow in the occupancy of a farm incumbered with some $1800 of debt. She has hired all the work on the place, and has, in the ten years, reduced the debt to $300, besides educating two daughters to the ages of eleven and twenty-one, respectively, and bearing the extra expense of two severe sicknesses in her own person. As to repairs, improvements, &c., I only know that I have sold her several thousand feet of lumber in the last four years, for fences, new roofing barns, &c. She has sold some timber, but only enough to cover the expense of a family carriage, and a piano for the eldest daughter, which articles she has purchased in the meantime. If that farm has not afforded a profit, I hardly know what business has or can.

Arlington, Vt., July 9, 1860. A. B. CONE.

CROPS IN CONNECTICUT.

The last week in June was a hot sultry week with us. Since then the weather has been changeable, a few days hot and then cool again, with easterly winds. We had a fine rain on the 5th of July which will carry out the grass crop. As a general thing, grass is a fair crop in this section as far as I have seen, though old meadows will be light. Rye and oats look well on the ground, oats in particular. Corn and potatoes stand well at present. There is a prospect for a fair fruit crop. Apples look well on the trees. Cherries and strawberries have been good. L. DURAND.

Derby, Ct., July, 1860.

WATER PIPES.

I have seen several comunications in the *Farmer* relating to pipes for conducting water, and I wish to inquire through the *Farmer* more fully. I wish to know the best kind where the water stands in the pipe one hundred feet and is drawn from thence by pump, and the price per foot for one-inch pipe? Also, if wood will not injuriously affect the water where it stands so long a distance in it? Any other information relative to the subject will be gratefully received.

DANIEL HILL, 2D.

Goodwin's Mills, York County, Me., 1860.

REMARKS.—See editorial remarks in another column.

CURE FOR HOLDFAST IN CATTLE.

In reply to the inquiry of "N. Mathews, of Henniker, N. H.," for an article for the cure of what he terms "Holdfast," I think that oil of spike applied once or twice a day, for three days, and leave off the use of it for three days more, will cure in a short time. Oil of spike is composed of sulphuric acid 1650 sp. gr. and spirits of turpentine, equal quantities. Put an ounce of spirits of turpentine in a strong bottle and add sulphuric acid in small quantities till you have added an ounce.

Ripton, Vt., July 7, 1860.

SOWING GRASS SEED.

I noticed in the monthly *Farmer* a piece written by O. L. Dow, on "Seeding grass land." In sowing the seed before plowing, I wish to inquire if he sows his grain at the same time he sows his grass seed? I have a piece I wish to sow with wheat and grass seed in the fall, and an answer to this question will much oblige me. LUKE NEWELL.

Mason, July, 1860.

GETTING THE VALUE OF HAY.

Seeing an article in the June number of the *Farmer* entitled "Value of a Load of Hay," reminds me of a more simple method which I have found very useful; viz: multiply the price per ton by five, and you will have the price per cwt. For example, suppose the price per ton to be $15, multiply 15 by 5 and you have 75, which is the number of cents per cwt. Perhaps you have heard of this, but I have found many men who had not. A SUBSCRIBER.

COW SUCKS HERSELF.

Can you tell me the best way to prevent a cow from sucking herself? I have a good one that will occasionally do it, much to my loss and inconvenience.

Orange, Vt., 1860. A SUBSCRIBER.

REMARKS.—A bow on the neck, with sharp pins in it, or a muzzle of leather above the nose, with picked iron pins, and fastened to the horns, will prevent this bad habit.

TO CURE WENS ON CATTLE.

Soft soap made thick with salt, and rubbed on smartly, will cure wens on cattle, if done in time.

Brownsville, Vt., 1860. HORACE SPALDING.

A BIG CALF.

Mr. Eustis Baker, of West Dedham, owns a cow that dropped a calf on the 7th inst. weighing 126 lbs. Durham bull. Ayrshire cow.

WHITE DORKING EGGS.

Can you inform me through the *Farmer* where eggs of the White Dorking fowls can be obtained, and at what price? S. S.

Stoughton, July, 1860.

REMARKS.—Probably at some of the agricultural warehouses.

VIEW OF OHIO AGRICULTURE.

The Annual Report of NORTON TOWNSEND, the President of the Ohio Board of Argiculture, to the Legislature of the State, is published in the Ohio *Cultivator*. In respect to the amount of staple agricultural products, he thinks the past year cannot be regarded as favorable. The spring gave promise of an abundant harvest, but severe frosts in the month of June blighted the prospect. Although the north-western part of the State nearly escaped this destructive visitation, the injury to the wheat crop in other sections was so great, that not less, probably, than one-fourth of what had promised to be an unusually good yield was destroyed, involving the loss of perhaps eight millions of bushels. The corn crop also suffered severely from the frost, but by prompt replanting, the crop may have been nearly up to the general average. Oats and barley have been better than usual. Potatoes much better than was anticipated in the early part of the season. The grass crop the past season was injured by the frost to

an extent never before known; in pastures the growth of grass was checked, but meadows were still more seriously injured. In some portions of the State where the frosts had been most destructive, they were followed by a drouth of long continuance, which was even more hurtful to the grass than the frosts had been; consequently the quantity of butter and cheese, and the number of fat cattle and sheep, furnished from those sections, were much less than usual. The anticipated scarcity of fodder compelled many farmers to sell young stock to be slaughtered, the loss of which will be felt for several years. This drouth served to demonstrate that only well drained and deeply tilled lands can be relied on in a dry season, for on such lands the herbage was often luxuriant and fresh, while old and untilled pastures were almost worthless. At no distant day arrangements will doubtless be made in Ohio for irrigation wherever it can readily be done. Draining tiles and mole plows were exhibited at many fairs, and the manufacture of tiles has been commenced in various parts of the State.

The President is gratified to report that farmers' clubs are becoming more common in various parts of the State, and that the standard agricultural works which have been placed in District school libraries by the State Superintendent, are extensively read and highly prized by the families into which they are received. He regrets the decrease of more than 30 per cent. in the number of sheep from 1854 to 1858, by the annual destruction of $150,000 worth of this kind of property by dogs. The great expense of fencing out other peoples' animals should no longer be imposed on farmers.

OHIO GRAPE CULTURE.

Mr. R. Buchanan, of this city, who has been identified with grape culture since it was first attempted in Ohio, for wine-making purposes, says there are now about four thousand acres laid in Ohio, of which about half are in the immediate vicinity of Cincinnati. The yield last year is estimated at 350 gallons per acre, for the whole State, which is much above the usual average. From a careful estimate of the vintages for the twelve years, the average yield of the Ohio Valley is 200 gallons per acre; on well cultivated vineyards, in favorable positions, 300 gallons, which is about the average product in France and Germany. In Missouri and Illinois the yield did not exceed 200 per acre, owing to the prevalence of the rot, and in Tennessee, Georgia and South Carolina, it is very much reduced by a destructive frost in April. It is said that the amount as well as the quality of the various wines produced in the different States of the Union is steadily gaining. The business is as profitable as any branch of agriculture—perhaps more so at present prices—two or three dollars per gallon. The culture of the grape has become very extensive in this country. It is not confined to any section, but seems to flourish alike in the West, the South and New England. It is anticipated that, with good weather, the Ohio vineyards will yield this year 1,600,000 gallons. There are also extensive vineyards in Missouri and other Western States, and in North and South Carolina, Georgia, Tennessee and Texas. The culture is also extending in Connecticut. Grape growers say this is to be a great wine year.—*Cincinnati Press.*

ORIGIN OF PLANTS.

Should the following record interest our readers as it has us, it will fully repay the space it occupies in our columns.

Madder came from the East.
Celery originated in Germany.
The chestnut came from Italy.
The onion originated in Egypt.
Tobacco is a native of Virginia.
The nettle is a native of Europe.
The citron is a native of Greece.
The pine is a native of the East.
Oats originated in North Africa.
Rye came originally from Siberia.
Parsley was first known in Sardinia.
The pear and apple are from Europe.
Spinach was first cultivated in Arabia.
The sunflower was first brought from Peru.
The mulberry tree originated in Persia.
The gourd is probably an Eastern plant.
The walnut and peach came from Persia.
The horse-chestnut is a native of Thibet.
The cucumber came from the East Indies.
The quince came from the island of Crete.
The radish is a native of China and Japan.
Peas are supposed to be of Egyptian origin.
The garden beans come from the East Indies.
The garden cress is from Egypt and the East.
Horseradish came from the south of Europe.
Zealand flax shows its origin by its name.
The coriander grows wild near the Mediterranean.
The Jerusalem artichoke is a Brazilian product.
Hemp is a native of Persia and the East Indies.
The cranberry is a native of Europe and America.
The parsnip is supposed to have been a native of Arabia.
The potato is a well known native of Peru and Mexico.
The currant and gooseberry came from Southern Europe.
Rape seed and cabbage grow wild in Sicily and Naples.
Buckwheat came originally from Siberia and Tartary.
Barley was first found in the mountains of Himalaya.
Millet was first known in India and Abyssinia.

Writers of undeniable respectability state that the cereals and others of these edible productions grow spontaneously in that portion of Tartary east of the Bela Tagh and north of the Himalaya mountains.—*Porter's Spirit.*

WHEN Sheridan was asked at an amateur play which performer he liked best, he replied, "The prompter; for I saw less and heard more of him than of any one else!"

EXTRACTS AND REPLIES.

DROUGHT IN VERMONT.

We are literally consumed by drought and grasshoppers; every crop on our little farm has failed, and the cattle are crying for food and drink.

Middlebury, Vt., July, 1860. E. E. HAGAR.

REMARKS.—While we are drenched with daily showers, and our crops are plethoric with fatness, our friends in portions of Vermont are suffering sadly for the want of rains. The earth is parched and the crops are wilting and drying up, while thousands of grasshoppers devour the little that is left. A gentleman from Addison county informs us that year before last he cut and secured one hundred tons of hay; last year he secured about thirty tons, but this year his whole hay crop will not reach one-third of that of last year.

We learn, also, that the drought is so severe in some parts of the State of Maine that but little grass, comparatively, will be cut.

The crop in all parts of Massachusetts, we believe, is abundant, and under the improved method of making hay under caps, will be secured in good order, notwithstanding the great amount of rain.

—

SWAMP LAND

I have purchased a piece of swamp land, and wish to know which is the best way to get it into grass? It has muck varying from one to four feet deep, with a white sand or gravel pan. There are bunches scattered over the surface where the wood grew, and they are of all sizes and shapes. The swamp is easily drained by a small brook or ditch. N. B. DERBY.

South Weymouth, July, 1860.

REMARKS.—The first operation in reclaiming a meadow should be to drain it so as to get the water out of the way and leave the surface in a condition to be trodden upon both by cattle and men. Care must be taken, however, not to drain too much—for if the water is taken entirely away from a loose, highly porous meadow, it will become so dry that seeds will not sprout in it, and if fire is applied in a dry time the whole meadow will burn about as freely as a pile of dry wood. Reduce the water so that it will stand from twelve to twenty inches below the surface, according to the nature of the land.

When the water is off, you cannot only work more comfortably, but more rapidly than while the water stands about you, or if the meadow is wet and becoming muddy wherever you are at work; the roots and rubbish which are collected will also dry better and burn more thoroughly.

Plowing is the most effectual mode of reclaiming, and in the end the most economical, unless the meadow is difficult of access, or is too soft to support the team. If only too soft, the plowing may be done by the use of pullies, keeping the cattle all the time on the hard land, if the border of the meadow is pretty level and not covered with trees. If you cannot plow, use the bog hoe. Cut off the bunches and burn them, and break the surface as well as you can.

When the surface has been broken, haul or wheel from some neighboring bank near by fifteen or twenty ox-cart loads of sand or fine gravel per acre and spread evenly; then add whatever fine manure you can spare, sow the grass seed and rake it in.

If the meadow is plowed and is sufficiently dry to receive a crop, nothing will ameliorate it more than to plant potatoes and tend them well. After that operation the ground may be laid to grass with ease, and will produce great crops.

CATTLE DISEASE.

In the July number of the *Farmer*, in speaking of the cattle disease, you say on the farm of Andrew Wellington you saw a cow which exhibited strong symptoms of the pleuro-pneumonia. That cow has since been killed, and upon examination proved to be entirely free from that disease. There was an adhesion of the apex of the heart to the pericardium or heart case, which caused the rapid breathing which you noticed. There was another cow killed at the same time, which also proved to be free from the disease, and the commissioners decided that there was no disease in the barn.

Please make this correction, and greatly oblige

ANDREW WELLINGTON.

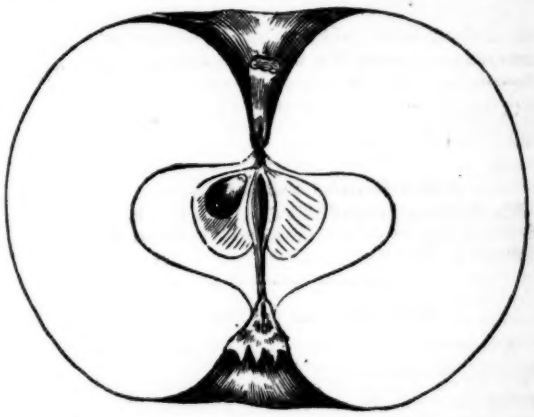
East Lexington, July 25, 1860.

WESTERN APPLES.

The outlines which we present to-day are probably those of Western apples. Whether they have been cultivated east of the State of Ohio, we do not know. We copy them from *Elliott's Fruit Book*, as worthy of introduction to our present list of fruits.

BETHLEHEMITE.

This is a variety somewhat resembling the Newton Spitzenberg, and we have testimony of one or two who say they know it under that name. We are not, however, satisfied of their indentity,



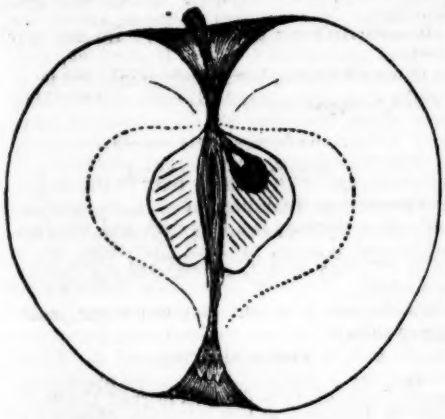
and as the really good qualities of this fruit are such as to make it desirable in all collections, we have no hesitation in recommending it. Thus far all specimens we have seen were from trees grown in rich, loamy soils, and all we can learn of its history is that it came from Bethlehem, in Ohio. Size, medium; form, roundish, flattened, tapering slightly to the apex; color, pale yellow ground, striped and stained with two shades of bright red, dotted with irregular shaped brown dots, some russet about the stem; calyx, medium sometimes large; basin, deep, broad, irregular, somewhat furrowed; stem, short; cavity, narrow, irregular; flesh, yellowish white, tender, with a

mild sub-acid juice, and exceedingly pleasant flavor; core, small, compact; seeds, obovate, obtuse pyriform. Season, November to January, but keeps until April. Trees, upright, strong growers.

BULLOCK'S PIPPIN.

American Golden Russet, Sheepnose, | Golden Russet, Little Pearmain, Fall Winesap, *erroneously.*

American. Tree, ultimately of only medium size, with a round, regular head, shoots erect, rather slender, admirably suited to rich soils of Southern Ohio, Indiana, etc. Grown south, the fruit is almost entirely covered with russet; north, and on sandy soils, it is a warm, rich yellow, with only marblings of russet. Size, small to medium; form, roundish, ovate, tapering much toward the eye; color, generally rich golden yellow, overspread with soft russet, and in sun a marbling of red; stem, slender; cavity, narrow, regular; calyx, small, closed; basin, shallow, sometimes furrowed; flesh, yellowish, tender, juicy, almost buttery, delicate, sprightly; core large for size of fruit; seeds, full, ovate, pyramidal. Season, December to March.



FOOT-ROT IN SHEEP.

A correspondent of the New York *Rural*, after detailing his efforts to eradicate this disease by paring the hoofs and applying an ointment of lard and blue vitriol, by which only temporary benefit was secured, and alluding to the hard work of doctoring for months several hundreds of sheep in this way,—made disagreable beyond measure by the offensive odor of decaying hoofs and the disgusting sight of crawling vermin, gives the following account of the course he pursued with his flock:

"At last it was decided that to eradicate the disease from the flock was the next thing to an impossibility, and that it was best to sell out. To get the sheep in condition for profitable sale was the next step, and having become heartily sick of handling and paring, I devised an easier method of keeping the malady sufficiently at bay to allow the sheep opportunity to get in suitable order for the market. I first made an inclosure on a dry, clean grass plot, and an aperture therefrom just wide enough to admit the egress of the flock, single file. Then I placed in this opening, on the ground, a water-tight box or trough of same width and three or four feet long, so protected on the sides and above as to force the sheep to step into the box. Then, in dry weather, when the hoofs of the animals were clean, a weak solution of vitriol was put in the box to the depth of two or three inches, and the sheep were turned into the yard and made to pass through. In this way, without touching a sheep, or without severe labor of any kind, a flock of considerable size received cheaply an application to each foot, which would so check the disease for a season that it would not materially interfere with their thrift. This practice was continued throughout the summer, as often as the case required, till the entire flock was fitted and sold for the shambles."

For the New England Farmer.

TWADDLES AND WADDLES ON AGRICULTURAL EDUCATION.

Twaddles.—I meant to have spoken to you the other day, Mr. Waddles, in our conversation on general agriculture, upon the subject of agricultural education, as it is one which interests me much, but time did not permit. You must know that there is much controversy at present upon this matter, and encouragement is given by some of our first men to introduce agriculture, as a department of education, into our common schools, with the prospective view of establishing an agricultural college in this State, something like those in Europe, which are in so successful opetion. You must also know, Mr. Waddles, that such education is much needed, especially by the rising generation.

Waddles.—Yes, sir, I know there is much discussion upon the subject, but I question whether such facilities are as much needed as the education; and I am far from thinking that European farming, with all its objectionable appurtenances, is proper for us to adopt. It would require a thorough revolution of all our laws and customs, which would be a great detriment to the real happiness of the people, and more particularly to the small, independent farmer.

T.—That I think is not proposed. But you must admit that farmers should be educated for their business.

W.—Certainly; and has not every man the best means for such education, who has a farm to till, books and papers to read, and lectures to listen to? who gets his theories from his own reflection, the experience and suggestions of others, and tests them in the general course of his operations on his own land?

T.—Why, Mr. Waddles, I suppose not; he wants it taught him. And do you not know that agriculture in America has fallen behind the age, and that the only way to bring it up to par value and dignity, is to educate, thoroughly educate, all who intend to engage in it?

W.—No, Mr. Twaddles, I respectfully deny that

agriculture has fallen behind the age, although in this State it may be necessarily passing out. But if our journals, books, fairs and lecturers have not kept it up, pray what can? Have all these, which have been thought so useful, been in vain? And as to the means of education, a farmer is perpetually at school, conning his great volume, and studying the special capabilities of his own farm, and consequently is, or can be, as well educated for his business as others of different vocations are for theirs. Farmers are not so ignorant of their calling as many soft-handed scholars suppose them to be, though they may be hampered for want of means. As to the dignity of farming, the easy, professional man has always looked down upon the hard laboring man in all vocations. It is a whim of society, and no schooling or colleges can regulate it, any more than they can make the sky rain potatoes. Take England, with her numerous agricultural schools for the poor, which are proposed partly to be copied, and do we not find the mass of the farm laborers only little above slaves both in morals and intellect? So fully did Mr. Colman notice this fact, that his Reports may be regarded as Books of Lamentations. And I think you will not deny that they are considered infinitely more degraded than those here, where we have no such schools or colleges, of any influence, to dignify them.

T.—Well, freely I admit it and regret it. But you forget the tenant farmer. He is generally an intelligent, well educated person; is thought—

W.—Well of, I suppose, because he superintends on his pony, and doesn't do what the more aristocratic class regard as drudgery. Excuse me, but I suppose you don't intend to make tenant farmers here because they only are respectable there.

T.—No, sir, that would be folly; for here our land-owners are too numerous, and large tracts of land in one man's possession too uncommon.

W.—Certainly; let this whim of dignity take care of itself, as it must; the less farmers think and say of it the better. In spite, however, of the schools, the man who lives at his ease will always be distinguished from the thousands whose necessities oblige them to labor. Upon this subject a philosophical discourse might be written.

T.—Or a sermon preached.

W.—Yes; and this reminds me that you are a clergyman.

T.—True, but I once worked on a farm.

W.—And feel an interest in the education of the laboring classes, and particularly the farmer, though you from some cause or other left his honorable vocation.

T.—I left for education, but my sympathies are with him.

W.—You ought to have returned with both. And you and others say, virtually, that he is ignorant and degraded, raises meaner crops than they do in England, and don't understand his business, as you unfairly suppose from this latter fact, that there is no uniformity or system in agriculture, and that in this land of freedom each one does as he pleases on his own soil.

T.—Why, yes; I suppose I must make a general plea of guilty.

W.—Now suppose your agricultural parishioners should politely say to you, through some "Resolutions," that your theology is very feeble, uncanonical stuff, that you don't preach as satisfactorily as others do, that you have some crude notions of your own, that you preach upon an indefinite system, if upon any, that you learned nothing useful at college, and that you don't understand your business. Would you not consider it in them (even whose servant you are) the concentration of impudence?

T.—Most certainly I should; for I think I understand *my* business.

W.—Think? Is not that presumption? Do you *know* that you understand your business, and that they are ignorant of theirs?

T.—But, Mr. Waddles, they don't understand theology.

W.—Haven't you taught them? Do you understand agriculture? Pray, is theology, with its thousand phases, better understood, and more definite than agriculture? Do we know anything more about God than we did a hundred years ago? Cannot the farmer justly say, that religion, so ably represented by a *learned* profession, is behind the age, with as much force as the clergyman can aver that farming is?

T.—But theology is a very dark and abstruse matter, and it is not my fault that there are so many religions extant, represented by equally learned men.

W.—No, sir, it is not. But you regard agriculture as so mysterious a science, that it requires learned men to successfully prosecute it. Upon this system of collegiate education, will not learned farmers be as likely to differ as learned theologians? If I become sick by digging ditches for tile, or by hard labor, or indiscretion, and die, is the learned physician to be told that he don't understand his business? Perhaps he don't. But who can teach him? The best lose patients, just as some good farmers occasionally raise poor crops. Nor because some one cures a certain disease in Europe, while many fail in it here, will it do to charge the American physicians with ignorance. There are a great variety of circumstances to consider. In England, however, generally speaking, the learned profession of medicine has been lately styled "a withered branch of science."

T.—Why, Mr. Waddles, nobody does so charge them.

W.—Perhaps not; but they might with as much consistency, as some farmers are charged.

T.—Ah, but please recollect that it is appointed for all men to die, and medicine is an uncertain science.

W.—So is farming; and it seems also to be foreordained that the elements should sometimes destroy the crops. That is a sprig of *my* theology. Now as to the other *learned* profession, the law. Can any member of this profession innocently charge a farmer with ignorance, seeing defects in his operations, while he himself daily becomes entangled in the proverbial intricacies of his own vocation?

T.—Good. I don't see how a lawyer could.

W.—Well, then, it would seem that agriculture here, without colleges, is still up even with theology, medicine and law—the three learned professions which require such profound erudition from the schools.

T.—But, Mr. Waddles, you forget that no vocation is perfect.

W.—No, sir, that's just what I've been telling

you; they are not. Agriculture is imperfect. But with its present literature, I think nothing better for its advancement than individual tests on the soil, by men having strong common sense, and loving their business. Farmers may find a profit in splitting rails, but not in hairs. They who till the soil for a livelihood cannot stop long to ascertain whether plowing ten inches deep is better than nine, or whether manure buried four inches is more advantageous than that of three. It is enough for them to get their plowing at an ordinary depth, and plenty of manure to apply in the ordinary way. Neither is it necessary that they should know the name and history of every weed that falls under the hoe in their gardens, or that carbonic acid enters largely into the organization of plants.

T.—But you ought not to overlook chemistry, botany, vegetable physiology, geology, &c. Certainly, these sciences every farmer ought to be conversant with.

W.—That would be a laborious accomplishment; a little tending to the superfluous and ornamental; and if all those who live upon the products of the earth were obliged to wait for their food till such farmers produced it, farming would not be likely to be profitable afterwards, even if a few passed through the famine to do the raising!

T.—Strange ideas of education! Well, now tell me frankly, are you not in favor of those sciences I alluded to being taught in our common schools, so that youth, when they come upon the farm, may know something of, and love these studies?

W.—Yes, voluntarily and with discrimination. They are now so taught in our high schools and academies, and in some of our common, district schools, when the parents or scholars wish them. You, I know, are in favor of teaching children something that will be useful to them in after life. So am I, and so is every sensible person. But if I do not intend my son to become a farmer, I do not wish him to spend his time in studying these branches with a view of becoming a farmer, because, forsooth, farming may be the most important vocation of the State. And I would not admit that the Board of Agriculture, or the Government should dictate to me what was best for him to pursue in after life, and educate him accordingly, whatever his, or my wishes. This idea is education become rabid. The common or high school is not the place to learn trades, but merely to get the rudiments of a general (not special) education.

T.—But I trust you don't regard agriculture as a trade. I look upon it as the most complicated science known.

W.—So it is; unfathomable in mystery; nevertheless, it's a trade, the practicable operations of which are as easily learned as most any other manual vocation; and it has been well said that the unscientific farmer can raise as good crops as the ablest chemist. Or it is an art, the thorough understanding of which is of more importance than its scientific aspect. The tilling of the earth being the common and natural business of mankind, (of which all others are the exception,) it would be cruel in the Creator to make the conditions of good crops so complicated as to defeat the purposes of agriculture.

T.—But, Mr. Waddles, I don't see but your system of education would keep every boy at home, or at least, you would have no institutions to teach the professions we have just alluded to; viz.: law, medicine and theology.

W.—Not at all. If I had a son who wanted to study medicine, (and the Board of Agriculture had no objection,) I would send him to a medical school; for a farm would not be the best place to study this science. And so, also, of law and theology; these studies being necessarily more intellectual, for which a well conducted farm would furnish but few facilities. But if I wanted him to become a farmer, and carried on a good farm myself, I would keep him at home, or put him with some good agriculturist; where, probably, instead of creating a debt of several hundred dollars, he might earn a portion of the sum. And this would be his institution, and a very proper one. If he wished to study this subject at school, fifty cents would furnish him with the proper books. But this should be voluntary on the part of parents and children. The State obviously should not assume to teach agriculture in the common schools any more than any other useful vocation; for instance, that of a builder, machinist, shoemaker, engraver, &c.

T.—Well, sir, if the town schools did all this, would it not be better than spending years in teaching the useless dead languages and the higher mathematics? Besides, what objection can there be to teaching agricultural chemistry, botany, &c., even if they do not give the rudiments of other callings?

[To be concluded in another number.]

For the New England Farmer.

A TEST OF CHARACTER.

MESSRS. EDITORS:—At the commencement of this century and previously, farming was the principal business of New England; and rearing swine and fattening pork was one of the most important items in farming. Almost invariably swine run at large during the spring and summer. You could hardly pass a farm-house without seeing from two to twenty, old and young, in the highway, or squealing, or wrangling about the trough where they were fed, all yoked and ringed according to law; for so the statute provided; that swine "going at large, be ringed all the year round so as to prevent their doing damage by rooting," and "yoked from the first day of April to the last day of October." Yokes were often made of a crotched stick with a bar put across below the neck upon the two prongs. If this were not done by the owners of the swine, every town had its board of hog-reeves, usually young married men, duly qualified, whose duty it was to yoke and ring all that were found in the highway not so accoutred. The fee for yoking and ringing every swine was "twelve pence," before the Revolution, afterward, "eighteen." Most farmers, of course, took care of their own swine. Hence hog-yokes upon every farm were an important article.

I remember an anecdote, which, in my boyhood, I used to hear my father relate of one of his neighbors, which may be worth preserving, for it has a moral that may apply to other times and other occupations. He was accustomed to hire

young men, in the spring, to work on his farm. When a young man presented himself, he would ask him, "When was the right time to cut hog-yokes?" One would say, in the spring, another in the fall or winter; others, not knowing what else to say, thought it was in the old of the moon, or in the new. To all such he would say, at once, "Well, you may go along; I don't want you." At length a young man called, no brighter nor smarter in his appearance than others, to whom he put his usual question, "When is the right time to cut hog-yokes?" "Well," said he, "I always cut them when I come across them." "Then," said he, "you are the man for me. You may go to work." Verily, there is a time and season for every work that is done under the sun. N. S.

Monadnock, No. 4, 1860.

REMARKS.—The questions put by the father were a pretty good test of a man's *aptness*, or that peculiar characteristic of the Yankee to take advantage of every circumstance to facilitate his business. Now a hog-yoke is a thing of peculiar form, and if one were to start into the woods to hunt for one, he might spend hours or days in vain, so that it will be seen that the answer of the young man was a shrewd one,—that he cut them whenever he came across them.

DEADENING WALLS AND CEILINGS.

Men of ingenuity, lend us your ears. There is no greater nuisance in modern houses than that of the transmission of sound through parti-walls. Any practical, inexpensive and efficient means of deadening sound will be a great boon. Solid walls and solid floors transmit sound in the highest degree. The Metropolitan Building Act provides that all parti-walls shall be solid and of a certain thickness in proportion to height and length. How is the evil to be overcome? "For eight years," writes a studious friend to us, "I have occupied a house in London; and during the whole of this time, there have been neighbors having young families. They are musical, and, I must confess, labor most industriously at the scales; morning, noon and night one or other child howls and strums, apparently without making any progress." There is no objection to neighbors' children learning music and singing —quite the reverse; but it is most objectionable that walls should so readily transmit sound, and render the ladies' efforts so widely known. Some persons always take a corner house, so as to be free from such nuisance on one side at least. Is there no remedy? The late Mr. Cubbitt had some trouble at Balmoral with certain floors, and remembered in taking down an old palace floor (many years before,) vast quantities of cockle-shells fell out from betwixt the joists. These had been used in plugging. The idea was acted upon. Cockles were dredged, and brought; the shells were cleaned and dried, and used, with beneficial effect. The cellular spaces thus produced absorbed sound. Some highly cellular texture may be applied to walls, ceilings and floors, which shall resist fire and ordinary decay, allow of finish, and yet deaden sound. Who is to invent and introduce such materials? They may patent the invention and make a fortune, if they will only abate the existing nuisance, and enable us to have solid parti-walls and fire-proof floors without being compelled to hear what is going on up stairs and in the next house.—*The Builder.*

For the New England Farmer.

CATTLE DISTEMPER.

TWO COWS SLAUGHTERED BY THE COMMISSIONERS AT EAST LEXINGTON, 11TH INST.

A short time previous to the extra session of the Legislature, I expressed my doubts, in a communication to the *Farmer*, of the contagiousness of the disease prevailing among Mr. Chenery's cattle and others, and intimated some lack of confidence in the post mortem examinations that had already been made, as they betrayed, to my mind, a pitiful ignorance of physiology and pathology. Nothing has transpired since to remove my doubts.

A week before the extra session of the Legislature, a meeting of the State Board of Agriculture, the cattle commissioners and other interested was held at the State House, when Dr. Bartlett asked why it was, if the disease was so contagious as represented, that Mr. Chenery's cattle had not communicated the disease to any of the adjacent herds, &c.? Dr. Loring replied that every precaution had been taken to prevent its communication, and the reason why no cattle had become diseased from Mr. Chenery's was simply because they had had no opportunity. That it was contagious was as "obvious as foot-prints upon new fallen snow."

When the disease was raging among Mr. Chenery's cattle last season, a part of the herd was turned out to graze adjoining a pasture occupied by the herd of Mr. Stearns Smith, with nothing but a common stone wall to separate them. At this time, two, at least, of Mr. C.'s cattle (calves) died in the pasture, and one of them was not noticed till decomposition had taken place. Mr. Smith's cattle have not appeared to be affected in the least. No town in the State is more free (Mr. C.'s farm excepted) from cattle disease and panic than Belmont.

Last April Mr. Chenery's oxen came to Mr. Peter Wellington's barn for hay—they had been there not long before. Last November these oxen were thought to have the cattle distemper—pleuro-pneumonia—but had recovered at the time of getting the hay. Mr. Wellington had several cows in and about the barn, three of which, at least, were tied up in the barn while the hay was being loaded. Two of these were boarders, and belonged to Mr. Edward Mulliken of North Cambridge. The third belonged to Mr. Peter Wellington, and ate from the same crib with Mr. C.'s oxen while in the barn.

Last week, Wednesday, the Board of Cattle Commissioners met the full Board of Selectmen at Mr. Peter Wellington's barn and after examinations and consultations, Mr. Mulliken's cows were slaughtered by Dr. Thayer, who, with others, had pronounced one of the cows, at least, to have diseased lungs. She had coughed a little, but appeared to be perfectly well. On examining the lungs of each cow, they were unanimously pronounced to be as healthy as those of any cow in the

State! Dr. Oramel Martin, of Worcester, was the only one present of the appointed Medical Commission, and he stated that a peculiar appearance of the lungs, which at previous examinations he had pronounced diseased, was *not* disease, but was not uncommon in health, and "further observation had led him to back out of that belief." Dr. Thayer frankly confessed that in the lungs before him the disease which he had diagnosed was not to be found.

Mr. Wellington was given to understand that the third cow would be slaughtered, probably, at some future time, and his son, Mr. Andrew Wellington, particularly requested that it might be deferred as long as practicable, *for his infant child was fed exclusively on the milk of that cow!*

Lexington, July 19, 1860. RUSTICUS.

THEORY OF CURING HAY.

QUESTIONS TO THE POINT.

We are just in the midst of the haying season. Believing that to husband this most important crop in the best manner possible, it is necessary to understand the chemical changes which take place during the curing of hay, or when it is damaged, I submit to you a few questions, which please answer through the columns of the *Homestead.*

1. When a handful of well-cured hay is allowed to be saturated with dew, how is it damaged?

If it does not drip, nothing soluble is carried off. When the hay dries, I cannot see but that an analysis would give just as much sugar, just the same quantity of albuminous compounds, and just the same quantity of fatty matter; but it is damaged. How?

2. Is grass only wilted damaged as much as cured hay by dew?

3. Can it be that grass cut when the dew is on will not make as good hay as that which is cut free from dew or rain?

If it will not, please give the reason. I cannot see how it is. It may take less labor to make the hay, but is it *much* or *any* better? I should be glad to see how it can be damaged.

4. Is it the flavor of hay that is destroyed when it is exposed to the sun for the length of time farmers generally do?

5. When hay is dried excessively in the sun, is there not the same quantity of sugar, albumen, &c., in it?

6. Is the per cent. of water in old and *unsalted* hay the same, without regard to the species of grass from which it was made; or will different kinds of grass dry away and retain the same quantity of water?

In answering the foregoing questions you will confer a favor on yours truly,

Oxford, July 12th, 1860. BENJ. WOOD.

ANSWER.—It is a real pleasure to be subjected to a discriminating catechism like the foregoing. We might play Sir Oracle, and endeavor to impress our readers with the stores of wisdom which we have to draw upon for their benefit; but the fact is, our correspondent touches upon subjects very difficult to discuss, for lack of facts and full investigations. We must argue from facts proven in regard to other things, and from those practically demonstrated, and perhaps take as true the statements of theorists which have led to successful practice.

It may be that the various changes occurring in grass and similar vegetables, under the circumstances incident to hay-making, have been investigated by some competent chemist and vegetable physiologist; but we know of no record of such investigation, and it is very much needed.

The juices of plants must be regarded as living or vitalized fluids, and the changes which they undergo in drying or dieing, must be regarded not as if they were mere solutions of sugar, gum, mucilage, albumen, etc. It is true that if we dry a solution of a mixture of many of such substances, in which no fermentation is active, we shall simply dry it without change; but if such a solution be in fermentation, changes will take place which a certain degree of dryness will check, and which will be recommenced whenever sufficient moisture is present. There is a vast difference in the changes thus induced which occur in different plants, and in the rapidity or ease with which they take place. Whoever preserves plants for an herbarium, knows that if he would preserve the natural colors of the flowers and leaves of many plants, he must secure very rapid drying before fermentation commences. The leaves of most of the lily tribe are of this character, and show by turning yellow, the least commencement of fermentative changes, and in this respect are vastly more sensitive than the foliage of most other plants.

Changes in vitalized organisms may be regarded as solely, or chiefly at least, in the fluids, and in the solids only as they are acted upon by the fluids,—so the juices of grass are our chief concern. These juices are, in the first place, living fluids, and as such, liable to change; they pass readily into fermentation, and in this condition are liable to certain other changes. The changes, while still there is vitality, are of a character similar to natural growth,—formation of cellular structure and woody fibre from soluble or partially soluble matters of the juices, maturing of the seed, &c. The changes induced by fermentation, on the contrary, are of a degrading character,—that is, tending towards decomposition. Fermentation changes starch into sugar, and this into alcohol, and alcohol into vinegar—each a less complex body than the preceding. It is incipient decay.

All these changes are arrested by a certain degree of dryness. If the dryness is excessive, we suppose that the vitality of the fluids of the grass is destroyed, and fermentation commences when there is sufficient moisture more readily than if the juices are so dried that a uniform thickening of them takes place, and they remain unchanged in other respects. There are, however, plants which may be dried to a good hay dryness, and still, when moisture comes, revive and live, striking root perhaps, or at least maturing seed.

The sunlight exercises, as we all know, a most powerful influence in promoting chemical changes. This can be seen in hay as well in anything else; but a few familiar examples not of the field may illustrate it better. Brown linen has a peculiar odor, a greenish brown color, etc.; it is bleached by dew and sunshine, white as the driven snow. Solar light contains what are called chemical rays, because this influence can be separated just as blue from yellow in the spectrum, and a great va-

riety of chemical processes depend upon these chemical rays,—the blackening of indelible ink, all photographic processes, etc., are familiar examples.

Plants of all kinds possess certain odors arising from volatile ingredients, usually volatile oils; these give the peculiar flavor to different kinds of hay to a great extent, and certainly have a very beneficial influence on digestion. Exposed to the action of the sunlight alone these are lost or changed to a great degree. Who would ever think of drying aromatic or sweet herbs a day or two in the sun? or especially, leaving them to be exposed to dews? The flavor would be woefully wasted. The good granny who takes care of such things, dries them on the warm attic floor, or on a salver in the sun, covering them with a double thickness of newspaper, and watching them that they do not get too dry before they are bundled up, and laid or hung in a closet of uniform temperature, neither moist nor hot. She understands that the exclusion of sunlight and quick drying are both essential to the preservation of flavor in her herbs.

We can hardly set too high a value on *flavor* in hay. The relish with which food is eaten is connected directly with the ease of digestion. Musty bread is just as nutritious as any, as regards its chemical constituents, but it is not so good food. So really relishable food is much better and goes further with man or beast than that which does not relish, be it of positively bad or of no good flavor. Admitting that this is the only evil of sunlight, viz., to deprive the hay of a portion of its aroma, this is enough to lead us to expose it as little as possible to the sun. But how much the sunlight aids in the formation of hard, woody fibre from the soft cellulose or from the fluids of the hay, we do not know, though it is not improbable that it does so.

Very slow, continuous drying, or drying under such circumstances as not to induce fermentation, allows changes to take place which result from vital action; thus the hardening and formation of the woody fibre almost inevitably occurs, reducing the soluble cellulose, the starch, sugar or gum, in like degree.

The whole aim of the plant is to mature seed and store in its roots food to give it a good start in the spring, or protect it against the accidents of close browsing, etc.; so when cut the little remaining vitality is directed to the seed, and in connection with its ripening, the increase of woody fibre in the stem inevitably occurs. We argue, therefore, that quick drying is desirable; but if this is impossible, fermentation, (heating in the cock) sufficient to destroy vitality, though not sufficient to cause essential changes in the substance of the hay should be secured.

We are now prepared to discuss the questions proposed by our correspondent; and must do so most briefly.

(1.) Well cured hay is injured by dew, because it is moisture alone of the conditions necessary to fermentation that is wanting in well cured hay, and when this is supplied by the dew it recommences injuriously. (2.) Grass only wilted is still possessed of vitality, and is not as much damaged by dew, if it be really damaged at all. (3.) And so grass cut with the dew on is not injured by the dew; but if the drying is essentially interfered with, and the exposure to the sun necessarily increased, it is an evil, to be considered, but probably of no great moment, except as it makes more work. (4.) We have already given our views in regard to the loss of flavor caused by the sunlight, and would answer *yes* to the fourth question. (5.) The fifth question we cannot answer; and (6.) We have no doubt different kinds of grass made into hay and in the same mow contain different percentages of water.—*Homestead.*

For the New England Farmer.

LINES,

On finding a Dead Young Bird in the Corn-field, while Hoeing, June 9th, 1860.

BY THE PEASANT BARD.

Poor little bird! 'tis sad to see
Thee lying here so sorrily,
Lost from thy native sheltering tree,
And leaf-roofed nest.
Beside this hill of corn shall be
Thy noteless rest.

Did wanton school-boy hurl the stone?
Or murderous villain aim the gun?
Or, yester evening, when the sun
Sank down the hill,
Did the cold rain-rills round thee run,
To drench and chill?

Now, bright around thee pours the day;
The springing corn-blades waving play,
And all thy sportive mates are gay
With tuneful breath.
O, do they know that here you lay,
Songless in death?

'Tis thus with selfish man, I know:
He sees a fellow mortal go,
And, saving when he feels the blow
Strike home and near,
He little heeds the sufferer's woe,
The mourner's tear.

Ah, me! I'd once a birdie sweet,
Whose days, like thine, were winged and fleet!
The angels came; her little feet
Had weary grown,
And with them to the blest retreat,
Long since, she's flown!

THEORY OF CURING HAY.—We copy with much pleasure from "*The Homestead*" of July 26, an article upon the subject of curing hay, a business which, in our opinion, is still imperfectly understood. We ask for it a careful perusal, and especially so by our haymaking friends of the "*Hingham Agricultural Society*," whose intelligent investigations on this and kindred points are worthy of all commendation.

AN EXCELLENT USE FOR DOGS.—An exchange says the most profitable use that nine-tenths of all the dogs in this country could be applied to, is to mix about five dogs with a barrel of lime and ten cartloads of muck in a compost heap. A barrel of wood ashes may be added to help the decomposition of the bones. We believe that a dressing of this compost, applied to sheep pastures, would greatly enhance the production of wool.

For the New England Farmer.

THOUGHTS SUGGESTED BY THE N. E. FARMER, JULY, 1860.

Page 301.—*Do animals consume food in proportion to their size?*—The affirmative answer to this question, that which ninety-nine out of every hundred of farmers would give to it, seems so perfectly in accordance with the dictates of common sense, and with general experience, as to make it next to impossible for us to believe that a man, who uses his head to so much good purpose as Mr. JOHNSTON is well known to do, could possibly intend, in the paragraph here quoted from an article of his in the *Country Gentleman*, to contradict flatly this affirmative reply, or give a directly negative one. Though his words may seem to imply such a negative, yet we believe he does not really intend to say that the common opinion in reference to the amount of food required to sustain animals in their present condition, or in *statu quo*, is incorrect. He was not writing in that article about common feeding of stock, or such feeding as would just carry them through the winter in *statu quo*, but about buying and fattening cattle and sheep. Hearing of Mr. JOHNSTON'S superior good judgment and success in this department of the farmer's manifold operations, a "young farmer" had asked Mr. J. to give him some information about buying and fattening stock. In reply, Mr. J. informs "young farmer" that it is better economy to buy sheep and cattle of rather large size or live weight, as the large-sized will lay on flesh and fat upon the same amount of extra feeding, quite as fast as those of smaller size, or even faster. He does not say any thing, as we understand him, about the whole amount of what they will consume, including grass or hay, but speaks only about their extra feeding, or of the meal of cake or grain, which must be given them in order to make them fat, or in condition for the shambles. He does not say that an ox of 1400 pounds, will not eat more grass or hay than one of 900 or 1,000 pounds, but only upon an equal amount of meal, along with what grass or hay each may choose to eat, the heavy ox will fatten quite as much or as fast as the lighter or smaller one, or even more so. This, surely, is not hard to believe; and this, surely, must be what is meant. It is not hard to believe, for we see every day, both among men and among domestic animals of all kinds, that some make more flesh and fat out of equal amounts of food than others do. This is especially noticeable in the case of swine, some breeds, and some individuals in every kind of breed, laying on flesh and fat much faster than others with exactly the same amount and kind of feeding. Then as to Mr. JOHNSTON'S meaning, one reason why we think that it must be what we have stated above, is this, that he says nothing about the amount of hay which is consumed, but states only the quantity of meal, three or four quarts a day—which he gives to each ox, while we learn from this and other articles from Mr. J.'s pen, that he does not confine his fattening cattle to the stable all the time, but allows them out in the yard the most of the time, where he feeds them hay in boxes, which they go to at their pleasure. Now, as Mr. J.'s hay is of the best quality, and as his fattening stock eat of this as much as they please, the reason why the largest fat the fastest, may be that they consume more hay, though no more meal; or it may be that an animal, which at the same age, weighs much heavier than another, possesses a power of manufacturing more flesh and fat from its food, than the smaller animal of the same kind; or it may be partly both of these.

With such an interpretation of the language of Mr. JOHNSTON, and such an understanding of his meaning, farmers will not be under the necessity of supposing that Mr. J. has made a great mistake, or that they have the testimony of a man of so much sagacity and experience against them, when they believe that animals consume about two to three per cent. of their weight of hay, or its equivalent, per day; while those engaged in buying and fattening stock may thus receive from him a valuable hint, for which they may, when verified by their own experience, feel under much obligation to him who so readily imparted of his light for the guidance and benefit of his brethren. Let them read the whole of the article from which the quotation is made, and we think their knowledge of their business—buying and fattening stock—will be materially increased, their obligation to Mr. J. more sensibly felt.

Page 304.—*The secret of having good milch cows.*—The whole of the secret or art is not given in this brief article; but undoubtedly a large share of it is. Corn fodder, roots, and other food naturally succulent, or made so by cooking, as Mr. BOUTWELL tells us at page 310, he prepares the food of his cows, is one of the essential requisites to having good milch cows. This article, and that of Mr. BOUTWELL above referred to, contain information or hints which might be made of more value to many than the cost of the *Farmer*, either weekly or monthly, for a series of years.

Mr. GRAVES' cows average about 2,500 quarts a year, and the poorest of Mr. BOUTWELL'S stock will yield, he says, 200 cans, or about 2,000 quarts, while some of the best have given a little under, and others a little over 300 cans, or 3,000 quarts. Mr. B. is confident, as well he may be, that few cows will yield 200 cans (2,000 quarts) of milk per year when fed on dry hay in winter.

Page 315—*A good heifer.*—The yield of milk in this case, 4,946 quarts in a year, is so much larger that that of the best of Mr. B.'s cows, that we would really like to know more of her winter keeping and other particulars. MORE ANON.

FINE WOOL AT THE SOUTH.—In reply to a correspondent, who asks whether a warm climate is unfavorable to the growth of fine wool, the editor of the Georgia *Southern Cultivator* remarks:

"Our observation during the last six years on the produce of Merino sheep, brought from the very best flocks of Vermont and New York to Georgia, is, that while there is no loss in the weight, there has been a decided gain in the fineness of the fleece. If a 'South Carolinian' will just prepare good pastures, and then get good Merino sheep, he will find that he can raise fine wool at a greatly less expense than is possible at the North. We are not speaking hastily when we express the conviction that wool growing, properly conducted, is, by far, the most profitable branch of agricultural labor at the South."

DESIGN FOR A TUDOR COTTAGE.

DESIGNED FOR THE NEW ENGLAND FARMER. BY G. E. HARNEY, ARCHITECT, LYNN, MASS.

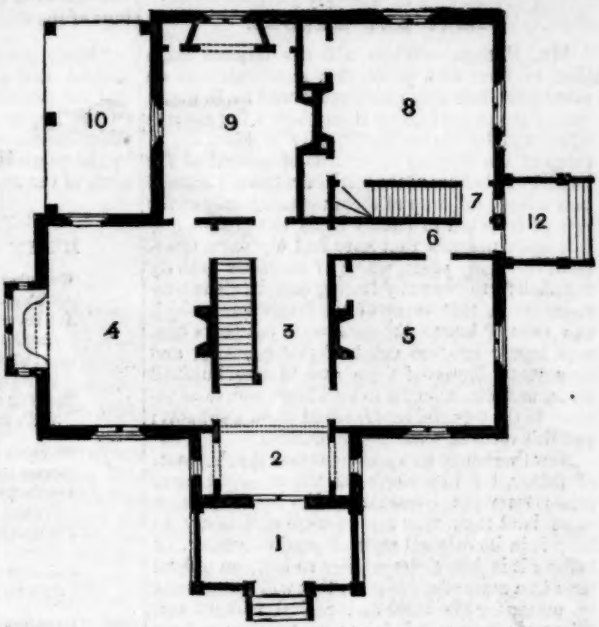
We here present a design for a country or suburban cottage of stone.

The situation most suitable for a dwelling of this class would be on an estate where two or three acres could be devoted to pleasure grounds alone. In this case we should have the lawn—somewhat undulating, if possible—surround two or three sides of the house, at least, leaving the fourth for domestic purposes, containing kitchen garden, orchards, stables and other out-buildings, and shielded from public view by plantations of trees and shrubbery. On the lawn, which should be surrounded by a border of irregular plantations—with the exception of openings left here and there for agreeable distant views—we would plant large trees and shrubs, singly and in groups, and so plant them as to bring into view from the principal points the most pleasing vistas, and hide those objects which are disagreeable to the eye.

We have supposed that the best views of the surrounding landscape may be obtained from the front entrance to the house; hence we have designed the arcade to occupy that position, shielding the front doors, and at the same time forming a very pleasant lounging-place or summer evening retreat. The double glazed doors open into a vestibule, No. 2, on either side of which is an arched recess for clothing, and in front a Gothic arch divides it from the hall proper, No. 3, which is 10 feet wide and 18 feet 6 inches long; on the left, two doors open into the drawing-room, No. 4, measuring 15 feet by 18 feet 6 inches, and lighted by a mullioned window in front, a large bay on the side, and a window on the rear reaching to the floor, and opening upon a veranda, No. 10.

At the end of the hall a door leads to the library, No. 9, 12 feet by 15, containing two closets, with a recessed window between. No. 5 is the dining-room, 15 feet square, and opening upon a back entry, No. 6. At No. 7 are the back stairs above and below. No. 8 is the kitchen, 14 feet 6 inches by 15 feet, containing two large closets,

in one of which is a dumb waiter from the cellar kitchen. No. 12 is a portico over the side entrance. In the cellar are cellar kitchen and scullery under No. 8; drying-room under No. 9; store-rooms under the dining-room, and common cellar under the hall and parlor. The second floor contains four large chambers with closets, a sewing-room over the vestibule and hall, and a bathing-room over the back entry.



Construction. — We have designed this cottage to be built of rough stone and covered with cement, or with a wash of some neutral tint. The trimmings to be of freestone, or any dark stone contrasting in color with the walls, and the details of wood painted to correspond. The interior finish should be of a plain, simple character, corresponding in style with the exterior.

The cost of this cottage will depend more upon the locality than a frame house. In situations where stone of a suitable quality is plenty, it may be built and finished throughout for $5000.

U. S. AGRICULTURAL SOCIETY.

Eighth National Exhibition, at Cincinnati, Ohio, September 12, 13, 14, 15, 17, 18, 19 and 20, 1860.

ROOMS UNITED STATES AGRICULTURAL SOCIETY,
Washington, D. C., July 20, 1860.

SIR: We have the honor to inform you that the Executive Committee of the U. S. Agricultural Society, who were authorized at the annual meeting in January, to locate and to make all necessary arrangements for the EIGHTH NATIONAL EXHIBITION, have decided to accept the liberal offer of grounds, fixtures, &c., and the guarantee of a twenty thousand dollar premium list, made by Professor Cary, Vice President for Ohio, in behalf of citizens of Cincinnati. This location was presented by Professor Cary to the attention of the Society at the annual meeting in 1859, and (it may be proper here to state) no objection was made from any source, until after it had again been presented by him at the annual meeting in January last, and formally accepted by the Executive Committee at its subsequent meeting, on conditions which have been fulfilled in the most generous manner.

The Eighth National Exhibition will be held at "the Park" near Cincinnati, an area of sixty acres, on the line of railroad leading to Columbus. The grounds will be fitted up in the best manner, and there will be a track one mile in length and forty feet in width, for the exhibition of horses. Every facility will be offered for the exhibition and trial of implements and machines; and as the Exhition will extend from the morning of Wednesday, the 12th, to the evening of Thursday, the 20th, (eight days,) it is much to be hoped that there can be those "tests" so necessary to give value to awards. The animated contests of Exhibitors for the Medals and Diplomas of the United States Agricultural Society, prove the high estimation in which these awards are held, and it is but right that they should be bestowed with discrimination, after a thorough examination. The delay which has heretofore attended the distribution of medals will be avoided, as they have already been ordered at the U. S. Mint. Premium Lists will be sent by mail to applicants.

The Agriculturists, Stock-breeders, Horticulturists, Pomologists, Mechanics, Artists, and other industrial citizens of the Republic, and of the adjacent British Provinces, are respectfully and earnestly solicited to contribute to this Exhibition, that it may be one of general interest in all its departments. No labor or expense will be spared to render it creditable to the "Queen City of the West," and worthy of the great Agricultural interests of the country, which the Society represents.

With sentiments of the highest respect, we are
Your obedient servants,
HENRY WAGER, *President.*
BEN: PERLEY POORE, *Secretary.*

ORNITHOLOGY.—In another column we present the reader with the first of several articles which we are promised by our intelligent and obliging correspondent, "J. A. A." Our columns have already been enriched by his contributions, in meteorological and various agricultural matters, and the reader may safely anticipate interesting and profitable reading in the forthcoming articles.

For the New England Farmer.

LAND AND MANURE.

MR. EDITOR:—When will our farmers learn that, to farm with profit, they must cultivate no more land than they can manure well? Being in one of the towns in New Hampshire a few months since, and having an opportunity to learn something of the farming operations of several of the largest cultivators of the soil in the town, I learned that a large majority of them manured only at the rate of from ten to twenty loads to the acre, and this upon uplands that have had the same treatment for many years, which of course is entirely insufficient to have any lasting benefit. The consequence is, that many of the farms from which two tons of hay to the acre were cut years ago, now barely produce one-half that quantity, and very many farms of from one to two hundred acres, and which ought to be a large source of income to the owners, barely afford them a support; and this on land naturally productive.

Now there may be various reasons for this state of things, but in my opinion, the principal cause arises from the miserable policy of cultivating more land than they can manure sufficiently to keep it in its original state of productiveness. I believe it is just as impossible to keep an upland farm in a state of cultivation that will renumerate its owner for his labor and capital, without sufficient manure, as it is for a man to labor without sufficient food to nourish and strengthen him. If farmers will look into this matter, and act up to its truthfulness, my word for it, you shall hear less about farming as being so very unprofitable. Some fifteen years ago, in one of the hilly towns in New Hampshire, a man purchased a farm of about 150 acres, which was pretty well worn out, but naturally productive land, paying but a small portion of the cost down, as he had but a few hundred dollars to begin life with. One of the first things this man did, was to go to the village, and engage manure, and draw it full two miles to his farm, and up hill at that. The farmers about said to one another that neighbor Jones could not afford to buy manure and haul it such a distance, as he was yet in debt for his farm, and they prophesied speedy bankruptcy for him. But neighbor Jones still continued to buy manure, and the consequence was that he got the best crops of any man in town, and to-day he has the richest and most productive farm in that vicinity, all paid for, and his neighbors say it is worth at least ten thousand dollars, and I believe still continues to buy manure as occasion requires.

It was my privilege to visit this town in August last, and from an eminence I could overlook some twenty-five farms, and where almost every other one was parched and dried up, neighbor Jones's was green and luxuriant, showing plainly the effects of high cultivation. C. C. H.

Boston, July 20, 1860.

THE CURCULIO.—Having seen our own apples so thoroughly hacked for the last six or eight years, that we have found it difficult, some seasons, to select a single specimen which did not bear unmistakable evidence of the operations of the curculio, we are not a little surprised to find the following paragraph in the published proceedings of the Ohio Pomological Society.

"Much general conversation was had on the subject, and no one present was of the opinion that the curculio ever committed any ravages upon the apple. Dr. Warder, Mr. Bateham and others expressed the belief that the injury observed by the gentleman in Washington county, was the work of the apple worm, and not the curculio.'

HYMN OF THE HARVESTERS.

We gather them in—the bright green leaves—
With our scythes and rakes to-day,
And the mow grows big, as the pitcher heaves
His lift in the sweltering hay.
O ho! afield! for the mower's scythe,
Hath a ring as of destiny,
Sweeping the earth of its burden lithe,
As it's swung in wrathful glee.

We gather them in—the nodding plumes
Of the yellow and bearded grain,
And the flash of our sickles' light illumes
Our march o'er the vanquished plain.
Anon, we come with the steed-drawn car—
The cunning of modern laws;
And acres stoop to its clanking jar,
As it rocks its hungry jaws.

We gather them in—the mellow fruits,
From the shrub, the vine and tree,
With their russet, and golden, and purple suits,
To garnish our treasury.
And each has a treasure stored,
All a'neath its tinted rind,
To cheer our guests at the social board,
When we leave our cares behind.

We gather them in—this goodly store—
But not with the miser's gust,
For that great All-Father we adore,
Hath given it but in trust:
And our work of death is but for life,
In the wintry days to come—
Then a blessing upon the reaper's strife,
And a shout at his Harvest Home.

For the New England Farmer.

POTATO.

A variety of potato originated from seed is generally considered in England to continue about 14 years in perfection; after this period it gradually loses its good qualities and becomes unproductive. Without endeavoring to account for the origin of the potato rot, they say that in the present state of this disease, clay soils should be avoided, for out of 163 cases in England, 129 were returned as having suffered much by the disease. Out of 32 cases on peaty soil, cultivated with moss in the hill, 5 suffered much, and 17 little, while 10 escaped altogether. The conclusion to which they arrived was, that in pure, well drained peat moss, potatoes suffer very little from disease. Wood ashes are a safe manure when applied by themselves, and crops have suffered little or nothing by disease, throughout Great Britain, when manured with them alone in the proportion of 27 to 4, but when mixed with farmyard dung, the success has been as 54 to 15, that is, in the former case 4 suffered much, while 54

nearly escaped. Over-luxuriousness, from whatever cause, was highly favorable to the progress of the disease, and *vice versa*.

Mr. Marcy, in his address before the Hampden Society, remarked, that "potatoes have been stimulated to death. The potato rot, whether it be an insect, or a fungus, or some internal organic disposition to decay, is, we believe, due to artificial stimulating fertilizers. The best potatoes we have seen this year, the cleanest, fairest, the most free from rot, the most perfect every way, were raised on sandy soil, upon which nothing but peat had been placed for several years." I.

THE MONSTER PETRIFIED TREE OF BLACK ROCK.

Some doubts having been expressed as to the truth of the discovery said to have been recently made in the Black Rock region, of a petrified tree of some seven or eight hundred feet long, J. E. Stevens, the captain of the late silver prospecting expedition in that region, and who fathered the wonderful story, writes to the Marysville *Democrat* on the subject. He says:

"Our party of thirty-five men encamped at the lower end of what we termed the Little Canon, about three miles from which we found this famous petrification, and which is truly a great curiosity and a wonder of the age sufficient to arouse the credulity of those who passed through the 'High Rock Canon' in 1849. At a short distance from this monster of a former age, it seemed to us to be a well-defined line of drift-wood deposited along the line of high water mark of some ancient river, whose bed is now an elevated mountain ridge; but on closer inspection, we unanimously pronounced it one tree, as we found it distinctly marked from the upturned roots to its forks, and its two well defined forks to what was, when standing, an altitude of 666 feet, or 222 such steps as a western frontier man takes when stepping off his distance to shoot at a target, or any man would take in pacing off a turnip patch.

At about 400 feet from the roots, the tree is divided into two parts, or forks, about equal in size, and at 520 feet from the root, I took off a specimen from one of these forks, having on its surface at the time the outer and inner bark of the tree, and which specimen is now in the office of Dr. Thompson, on D Street, between Third and Fourth. From the curves of the lines of growth we estimated the diameter of the branch from which it was taken, to be from 8 to 12 feet, and this, bear in mind, at a distance of 520 feet from the root of the tree and only half the tree at that. This estimate may be too high, or it may be too low, but in the height of the tree, we cannot be far at fault in saying that it measured when standing some 700 or 800 feet in height."

Capt. Stevens adds that J. B. Dorr, lumber dealer, Capt. McKenzie, formerly of the steamer Petaluma, and several other gentlemen of undoubted integrity, who reside at San Francisco, will not only confirm the truth of the existence of the petrified tree, but show specimens thereof.

USEFUL RECEIPT.—The *Scientific American* advises the ladies, when they wish to wash fine and elegant colors, to boil some bran in rain water, and use the liquid cold. Nothing, it is said, can equal it for cleaning cloth, and for revivifying effects upon colors. Try it, ladies.

RAISING GRAPES BY HORSE-POWER.

We have been amused by the following statement of a "clericus" correspondent of the Canadian *Agriculturist*. The writer remarks that he had been reading an English work on grape-growing, in which "horse-power" was strongly recommended in the production of grapes, and that he fell into the mistake, very common with amateurs and novices in gardening—that because a little of a thing is good, a great deal must be better; and that because an application was beneficial to a heavy, cold clay soil, it must be equally so to a light, dry soil.

"Having selected a well sheltered spot, some sixty by eighteen feet, it was dug perhaps thirty inches deep. At the bottom were laid one hundred and twenty bushels of bones, to obtain which, the boys with laudable zeal scoured two townships. On these were placed several horses, and to keep them company, a prize bull and a span of oxen. On these again were deposited road scrapings, sand and black mould, fourteen inches in depth. This having been levelled, all was ready for planting. Such was Mr. Robert's prescription. The vines were obtained. Black Hamburgs, Black St. Peters, Zingindal, Royal Muscadine, Golden Chasselas, Pitmaston, White Cluster, Macready's Early White, Red Frontignac and Tokay. They grew the first season marvellously. By the autumn, the canes were long and stout, and bid fair to bear all that it was prudent to permit them to do. The following season they were lifted, washed, carefully and constantly pruned, thinned and trained. They bore abundantly; many beautiful bunches, beautiful for size and color, rewarded the expenditure of toil and expense. But the next season, the third, in which I looked for a large and remunerating crop, what came then? Then when the roots had fairly reached the soddened mass, and their tender extremities were scorched and burnt, then mildew overspread them all. There was no exceptions; Isabellas and Catawbas, and the little hardy black cluster, which were treated in the same manner, one and all, presented a mass of blackened foliage and mildewed fruit. This was raising grapes by horse-power with a vengeance. I know better now. No fresh horse goes into my border now to force an unnatural growth, and then to burn the delicate fibres just as they stretch out to seize the proffered nourishment. Not that the possession of one or many such carcases is not desirable, but before applying them, they should be covered with mould, and suffered to decay; such mould will, indeed, be rich, and if applied to the plant in small quantities at a time, will nourish it and cherish it to its heart's content. I tell you all this, dear reader, in confidence. I have never told it before. I cannot now wonder at the wry faces of those who beheld my preparations, nor at their solemn asseverations, that they would never eat grapes raised by such a method. Alas, they never had the chance!"

RAISING PIGS.

First. In selecting the pig to raise for a breeder, count the teats. One with twelve fully developed teats will infallibly be prolific and a good nurse—good for milk and careful of her young. Fourteen teats should be preferred; but never try to raise pigs from a sow with less than ten good teats. I risk my swinish character on the correctness of this rule.

Secondly. We come now to one of the most important points in the rearing of all animals, especially the hog, viz.: education. I do not mean that it is absolutely necessary that your swinish breeder should be taught to read—though I am not prepared to say she is not capable of learning even that; but I do mean to say, that she should be so petted as to become fond of the person who has the care of her, and thus lose the natural ferocity of her kind, and not be disturbed by his presence when she brings forth her young.

Thirdly. It now remains to offer a few observations on keeping. The provident will make the animal earn half her living in manufacturing manure. At all events, she should have sufficient space and exercise to insure good health and the use of her limbs. If she can occasionally have an out-door run, and a chance to root the ground, it will be beneficial. Give a sufficiency of food to keep in good flesh and growing, a sufficiency but not an excess of salt, and an abundance of drink. Keep warm in the winter and cool in the summer. A pailful of cold water, occasionally dashed on to the animal on a hot day, is very reviving and conducive to good health. The hog goes with young sixteen weeks. They seldom vary 24 hours from that time. The feed should be gradually increased as much as eight weeks before they bring forth. For two days after, she should have no food except a little thin warm gruel, not to exceed half a pint a day of meal. She should have all the warm water she will take, which will sometimes be two pailsful in a day. This is very essential, as it helps the flow of milk and prevents fever. You may now gradually increase the feed till the pigs are two weeks old, when she should be full fed. If you have no better feed, good Indian meal mixed with milk will answer very well, if you give enough and feed regularly. The pigs should be taught to eat with their mother as young as two weeks, which may be done by having a broad shallow trough, and gently putting them into it when the mother is eating.

By pursuing the foregoing course, I have not failed once for the last thirty years, when I have tried, in raising a healthy litter of pigs. Some years of the thirty I have not kept a sow, but have often raised two or three litters in a year. I am considered one of the lucky kind. By trying this plan, and avoiding breeding in-and-in, some of the unlucky ones may possibly change their luck. —*J. H. Willard, in Maine Farmer.*

SEEDS FROM SYRIA.—The Patent Office is in the receipt of a very large and fine assortment of seeds and cuttings from Syria, at the very moderate expense of $1000. They were collected by the Rev. Dr. Barclay, missionary there. There are varieties of wheat, barley, grape-cuttings, olives, scions of fruits, vegetable products and useful plants. The scions, cuttings, &c., will be sent to the propagating houses for experiment and increase, and no distribution of the remainder will be made before the fall. Among the interesting plants is the lessaban, from which it is said the crown of thorns was plaited. It is very ornamental, and makes excellent hedges. There are also seeds of melons, squashes, camels' food, dates, walnuts, equal to the English, and probably well adapted to the Southern or Middle States. The seeds of the mais tree, which is esteemed as medicinal or prophylactic, were procured from the inclosure of the Temple of Solomon.

The next Patent Office report is to contain directions as to the proper manner of sowing seeds, as it is known that many of the failures to reproduce from the seeds distributed by the Patent Office arise from ignorance of the proper methods to procuring germination.—*Washington Letter.*

NEW BOOKS.

NATURAL HISTORY. For the use of Schools and Families. By Worthington Hooker, M. D. Illustrated by nearly 300 engravings. New York: Harper & Bros., 1860. For sale by A. Williams & Co. 1 vol., 12mo. Price $1.

There are few things that afford us more pleasure, than to find well analyzed and well-printed books upon natural history, philosophy, chemistry, agriculture, or upon any of the useful arts or sciences, taking the place of the exciting and miserable works of fiction which have been paraded before the public for the last twenty years.

Illustrated works on natural history are always attractive and acceptable to the young, and the one before us cannot fail to find its way into thousands of schools and families, and exert a most happy influence there. It contains a mass of material, which every well informed person ought to know, "but the grand practical benefit to be derived from the study of Natural History, is the discipline which it gives the mental powers. It cultivates the perceptive and reasoning powers together, thus forming that habit of *intelligent observation*, which makes its possessor, as a matter of course, a person of extensive general information, and is an essential element of success in almost any pursuit in which he may engage." The book is printed on large type and good paper, and illustrated with fine engravings of the animals of which it treats.

THE HAND BOOK; or, Annual Record of Horticultural and Agricultural Statistics. compiled from various sources. By Wm. P. Sheppard, New York.

This work treats of some of the general principles of farming and gardening, and gives a descriptive catalogue of culinary vegetables, and other garden plants. It has, also, a list of new plants, and some useful tables of statistics.

THE CATTLE DISEASE.—There is now every reason to believe that the wise and energetic precautions taken by the authorities of Massachusetts have operated as an effectual check upon the progress of the terrible disease which at one time threatened contagion and death to the cattle herds of New England.—*Maine Farmer.*

WHAT CONSTITUTES LEGAL UNSOUNDNESS IN HORSES.

A Knee-sprung horse can hardly be said to be unsound. He may be a very fast horse, and can endure with ease the labor of any common, ordinary horse, although there is an alteration of structure which unfits him for the race-course. This would not be likely to produce disease or lameness; he would be more likely to grow better than worse, if used for common purposes. But, if so bad as to produce stumbling and falling, he would be unsound, and a warranty should be taken against such *defects*.

Capped Hocks cannot be considered unsoundness, if produced by an uneven stable floor, or by kicking; but, if produced by a sprain, and a permanent thickening and enlargement of the membranes, there would be unsoundness. A special warranty should be required in such cases.

Contraction of the Hoof is a considerable deviation from the natural form of the foot, but does not necessarily constitute unsoundness. It requires, however, a most careful examination by the purchaser, to ascertain that there is no fever or ossification of the cartilage; that the frog is not diseased; that the animal is not tender-footed or lame. Unless some of these symptoms are indicated, he must not be pronounced unsound. A special warranty should be required, where the feet are contracted.

Corns manifestly constitute unsoundness. Although few men lay much stress on this malady, still much inconvenience, and many times serious difficulties, must be encountered by them, as they are seldom thoroughly cured. Many horses are almost constantly lame with corns, through a scrofulous habit of the system. A warranty against such animals would be safe.

Trembling Knees.—This cannot be considered unsoundness; yet it is a precursory symptom of *knee-sprung*. Trembling of the knees, after a smart exercise, indicates weakness, and should be regarded as objectionable.

A Cough constitutes unsoundness, however slight or of short standing. If a horse is noticed to cough before the purchase, or immediately afterward, he is diseased; but if warranted sound, and the cough is not discovered till one or two days afterward, he is not returnable; for a few hours is sufficient to contract a cough, by taking cold while standing in a damp, musty stable, or by eating different feed, musty hay, &c.

Roaring, Wheezing or *Whistling*, is unsoundness, being the result of alteration of structure, or disease in the air passages. Although there have been decisions to the contrary, courts and jurors are often at a loss, for the want of intelligent witnesses; and if a veterinary surgeon is called to the stand, not having seen the animal, he is liable to be mistaken from misrepresentation. *Broken Wind* is still more decidedly unsoundness.

Crib Biting.—A difference of opinion exists as to this being unsoundness, and courts have given opposite decisions in respect to it. There are cribbers that can scarcely be said to be unsound, as they are not perceptibly injured, and it does not interfere with their condition or endurance. Others inhale and swallow a great amount of wind; they bloat and are subject to colic, which interferes with their health and strength; this would constitute unsoundness. A warranty should always be taken against injury from cribbing; then if he breaks his teeth or injures himself, recompense may be had.

Curb constitutes unsoundness as long as it lasts, and perhaps while the swelling remains, although no inflammation exists; for a horse that has once thrown out a curb, is liable to do so again on the slightest exertion. A horse, however, should not be returned, if he spring a curb five minutes after purchase, for it is done in a moment, and does not indicate any previous unsoundness.

For the New England Farmer.

ANOTHER GREAT ELM.

In the *Farmer* for July 7th, is an account of the old elm on Boston Common. Thinking it would not be uninteresting to your readers, I herewith send you the dimensions of another. Girth of trunk at surface of the ground, 29 feet; girth at 18 inches above surface, 19 feet; girth at 5 feet above ground, 15 feet; height to first limb, 9 feet; height of tree, 78 feet; average diameter of greatest extent of branches, 96 feet.

The tree stands in the yard of Mrs. Norman Boardman, in Salisbury. Although it cannot boast of having counted as many years, or hearing as many famous speeches, or of having performed the friendly office of gibbet, whereon to hang heretical quakers, yet I think it may boast of a more rapid growth. Long after Capt. Joel Boardman, who is now living, settled in this vicinity, he tried to pull the tree, which was then a sapling, up with his hands; not succeeding, he let it stand. A few years later, or about the year 1800, it had attained such a size, and there being a crotch in its top, Mr. Boardman cut it out to make a harrow, which accounts for the shortness of its trunk. About that time holes were mortiсed into it, and it was used for a bar-post. It is remembered as a tree of about a foot in diameter, fifty years ago. Although it stands without the bounds of the road, it throws its gigantic arms nearly across it, forming a delightful shade, wherein the weary traveller may rest. A. K. MARVIN.

Salisbury, Vt., July, 1860.

THE PINE TREES.

The pine is trained to need nothing, and to endure everything. It is resolvedly whole, self-contained, desiring nothing but rightness, content with restricted completion. Tall or short, it will be straight. Small or large, it will be round. It may be permitted also to these soft lowland trees that they should make themselves gay with show of blossom, and glad with petty charities of fruitfulness. We builders with the sword have harder work to do for man, and must do it in close-set troops. To stay the sliding of the mountain snows, which would bury him; to hold in divided drops, at our sword points, the rain, which would sweep away him and his treasure-fields; to nurse in shade among our brown fallen leaves the tricklings that feed the brooks in drought; to give massive shield against the winter wind, which shrieks through the bare branches of the plain; such service must we do him steadfastly

while we live. Our bodies, also, are at his service; softer than the bodies of other trees, though our toil is harder than theirs. Let him take them as pleases him, for his houses and ships. So also it may be well for these timid lowland trees to tremble with all their leaves; or turn their paleness to the sky, if but a rush of rain passes by them; or to let fall their leaves at last, sick and sore. But we pines must live carelessly amidst the wrath of clouds. We only wave our branches to and fro when the storm pleads with us, as men toss their arms in a dream. And finally, these weak lowland trees may struggle fondly for the last remnants of life, and send up feeble saplings again from their roots when they are cut down. But we builders with the sword perish boldly, our dying shall be perfect and solemn, as our warring; we give up our lives without reluctance, and for ever.—*Ruskin.*

For the New England Farmer.

ORNITHOLOGY.

The wood, the mountain, and the barren waste, the craggy rock, the river and the lake, are never searched in vain; each have their peculiar inhabitants, that enliven the scene and please the philosophic eye."—*Montague.*

Nature has, indeed, left no void, no bare hiatus in the great circle of her creations. The closer our observations, the more extended are our discoveries, and the more wonderful and interesting. Throughout the great chain of nature there is no vacuity; everywhere is teeming life, in vegetable or animal forms, concerning which something new may be learned by observation every day. Our New England landscapes are burdened with beauty; the rolling hills, luxuriant in pasturage and noble forests; the valleys laboring with manifold crops and fruits; the more distant mountains, clothed with excessive verdure, rising grandly in the blue distance as they meet the purer blue of the sky. The flowers that spring up by the wayside, in the forest and over our fields, are full of beauty and interest to cheer the hearts of the not too grovelling, and furnish delightful subjects for investigation and thought to the observing. But not less conspicuous in our surroundings are the birds; for they not only cheer the sight with their restless activity, but charm the heart with their effluent music that often awakens the noblest emotions of the soul. Their graceful forms and varied colors never fail to please; and that man who, in the beautiful spring-time, when all nature is awakening to new life and beauty, can listen to their matin and vesper songs, and feel no thrill of noble pleasure, must possess a grovelling soul, capable at most of but little real enjoyment.

The habits of birds are instructive, ever-varied and interesting, each species possessing some peculiar characteristics of its own. The study of their habits and instincts affords the highest recreation, and, the mass know not how much of the pleasure of existence they lose by counting these minor things as beneath or unworthy their notice. Adapted to various and widely-different modes of life, some live almost wholly on the wing, as the swallows, subsisting on insects, and never alighting for food, but with a velocity outstripping the gale, course ether from morning till night—now almost lost to sight in the higher regions of air, and now skimming close to the meadow, the fields and the waters of the rivers or lake, as their insect prey is found to roam high or low in the ambient air. Others subsisting on the same food, watch from some convenient perch, and dart upon the unsuspecting insects as they pass by them, returning again to their watch; while still others of the insectivorous birds hunt their prey amid the leafy thickets, the boughs of the orchard, or the tree-tops of the forest, seldom alighting on the ground. Others, as the finches, sparrows, and many others, with feebler powers of flight, and members better adapted for walking, seek their food upon the ground, subsisting chiefly upon the seeds of plants and the larvæ of insects. Some are found to feed wholly upon insects, some upon insects and fruits, a few almost wholly upon juicy fruits, others chiefly upon seeds, and others, of omnivorous habits, upon all. Still others, again, of aquatic habits, frequent the marshes and the shores of the rivers and the lakes, and the ocean, probing the mud for their peculiar prey, or watching for reptiles and unwary fish; while others, fitted by nature for floating along the surface of the water, or diving beneath it, variously pursue their varied food. Others still, more rapacious in their character, prey upon birds and quadrupeds, in fact, upon all animated nature, exhibit great strength and courage, and spread terror among the weaker animals wherever they appear.

Among the three hundred or more species of birds found in New England, but a very few can be set down as injurious to the agriculturist, the greater part rendering him immense service in his labors; a few neither prey upon his fruit nor assist him in his toils, and those who claim a tithe of his products render ample remuneration in diminishing the insect hordes; and I am convinced that there are none absolutely injurious to his interests. Certainly, then, we may well ask, why persist in their destruction? Why, in ridding ourselves of a small evil, invite a greater? No kind of cultivation is affected extensively, and even this may, in a great measure, be prevented. Experience proves that it is not so with insects and their ravages; "the fate of the locust, the apple, the pear, and many other trees, shows, that if insects fasten themselves upon one of them, we must give it up as lost, for all that we at present know. Surely, then, of two evils we should submit to the one which may possibly be prevented, rather than invite and encourage one over which we have no control."

Of the birds embraced in the ornithology of New England, but few are permanent residents; a few are rare and irregular visitants; a few others come to us in winter from the far North, to escape the greater rigor of a more northern climate; many merely pass through our region on their journey to the distant northern parts of the continent, whither they repair in spring, to pass the period of incubation, and again on their return in autumn, to a more southern clime; and probably not more than half of our regular visitants are known to pass the breeding season within our borders. But few, comparatively, are known to people in general, and very many only to the closely observing ornithologist.

Observes that renowned ornithologist, Alexander Wilson—"For to me it appears that of all inferior creatures, heaven seems to have intended

birds as the most cheerful associates of man; to soothe and exhilarate him in his labors by their varied melody; to prevent the increase of those supernumerary hosts of insects which would soon consume the products of his industry." Indeed, then, are they worthy of our attentive study, of our protection, and not a small share of our affection.

In concluding this somewhat desultory article, I would say that I have long hoped to see some of the able ornithologists, correspondents of the *Farmer*, take their pens to inform your readers concerning the history of our rarer birds, and the interesting habits of our more common species; and hoping to invade no one's province, I propose, with your permission, Mr. Editor, to offer occasional articles on the birds of New England, noticing briefly many interesting species wholly unknown perhaps to farmers in general, vindicating or censuring the habits, as they seem to deserve, of the better known species; and in general, hope to interest some of the cultivators of the soil in the history of their feathered friends, that so abundantly surround them. J. A. A.

Springfield, Aug. 1, 1860.

AN INGENIOUS PIECE OF WORK.

Mr. Nicholson, a journeyman carpenter of Philadelphia, has just completed a *fac simile*, in miniature, of the National Washington Monument. The miniature contains 6480 pieces of wood of American trees. It is built on a scale of one-eighth of an inch to a foot, and when completed, it stands five feet eight and three-quarter inches high. The base is composed of 3681 pieces, arranged as a tesselated pavement. The wood, in this portion of the structure, includes white oak, walnut, oak from the frigate Alliance, red cedar and ash. The pantheon is composed of 308 pieces consisting of live oak, walnut, cherry, red cedar, boxwood (from the Paterson farm of New Jersey,) maple, mulberry, buttonwood, elm (treaty elm,) gum, walnut, hackmetack, locust, spruce, plain maple, birdseye maple, paper mulberry, red cedar, poplar, white pine, yellow pine, white oak, live oak, and wood from the charter oak, the frigate Alliance, the ship Constitution, and Fort Du Quesne. The star at the top of the obelisk is made of a piece of the old Independence bell. The whole is most neatly joined, over three years having been occupied with the work. As the model now stands, it carries out the same design in wood as is proposed to be carried out in marble by the erection of the national Washington monument. If the *Scientific American's* definition of ingenuity is right, viz: that it is a "very complicated combination of devices to produce a result that is not very useful," Mr. Nicholson's piece of work is very ingenious.—*Philadelphia Ledger.*

THE WILD CARROT.—A Stonington correspondent of the *Homestead* cautions farmers against the spread of this plant. He says:

"Of all the pests of the soil in this section, and most difficult of extermination, is the wild carrot. It is spreading rapidly through the south-eastern part of this State, infesting the meadows, pastures, and road-sides, each stalk with its head of half a gill of seed, to be wafted in all directions. It is but three or four years since I first noticed the wild carrot in this section. I find now in whatever direction I may ride, more or less of the wild carrots, sometimes whole fields covered with it. Farmers say that it seems almost impossible to exterminate it, or prevent its spreading."

USES AND VALUE OF MUCK---IV.

OF MUCK COMPOSTED WITH BONES.

In spading, and perhaps in plowing, the observing farmer has noticed more than once how rank and luxuriantly, and with what a dark green color plants grow, that have fortunately sprung up in the immediate vicinity of a large bone, deposited there, perhaps years before, by some provident dog, or sent from the farm-house as a nuisance that the inmates were glad to have abated by burying the thing out of sight. It is now partially decayed, having a sort of honey-comb appearance, and through it, and interlacing every part of it, are the delicate rootlets of plants, having travelled some feet, perhaps, in that particular direction to feed upon the phosphate of lime and the phosphoric acid with which the bone abounds. Now here are circumstances over which the farmer may pause, longer than Burns did over the mouse he turned up in his furrow,—and here are suggestions made, and lessons to be learned, which, if patiently attended to, will lead to many happy results; such as rich fields of corn and fruits and grain, fertile meadows and pastures dotted with fat and thrifty cattle, and consequently, liberal profits, and *cash in hand*, the ultimate object of his operations. Here is "the evidence of things not seen," the fact laid bare, that bones *will make plants grow*, provided they come in contact. Is it not, then, the part of wisdom, not only that all which come from the kitchen of the farm-house, be carefully preserved, but that every pains be taken to accumulate it in large quantities, and appropriate it to the advancement of our crops? Suppose this to have been done, and the muck ready for the compost, then the bones must in some manner be brought into a powder or paste; the latter is the best form in which to use them, and they may readily be brought into it, by weighing the bones, and then, to every one hundred pounds of bones, adding fifty pounds of sulphuric acid, the common oil of vitriol of the shops, and costing about three cents a pound by the carboy. If the bones have been ground, half that quantity of acid will be sufficient. Take a half hogshead tub, place it in some convenient spot, and surround it nearly to the top with moist litter or the drier portions of the horse manure heap, and then if the tub leaks during the operation of reducing, the leakings will be saved. First dilute the acid with three times its bulk of water; place the

bones in the tub and turn on one-half of the acid and water. In twenty-four hours afterwards, stir the mass, and if the bones are not all dissolved, pour on more of the acid and water, and so continue to do, until the whole is reduced to a pulp or paste. Another method of accomplishing the same result, is by making a heap of the bones on the barn or other floor; but it is not so safe and economical as the first method we have described.

When this has been affected, dry finely-pulverized muck should be intimately mixed with it, until the whole will be in such a dry state as to enable a person to scatter it with a shovel or by hand, evenly over the pile of muck with which it is intended to be composted. There is no loss in using the sulphuric acid, as it decomposes the silicates (sand) of the soil, forming new elements which are decomposed by the living plants, and are fed on by them. Now, then, the materials all being at hand, the pile may be constructed by a layer of the muck, six inches in thickness, then a sprinkling of the bone-dust scattered evenly over it, and so on, until the materials are all used. This compost we consider in value next to that of muck and barn-manure, and plenty of examples might be cited to sustain this opinion were it necessary. Professor J. P. NORTON, Elements, p. 98, says, "Two or three bushels of these dissolved bones, with half the usual quantity of yard manure, are sufficient for an acre. This is, therefore, an exceedingly powerful fertilizer. One reason for its remarkable effect is, that the bones are, by being dissolved, brought into a state of such minute division, that they are easily, and at once available for the plant. A peculiar phosphate of lime is formed, called by chemists a *superphosphate*, which is very soluble; and in addition to this, we have the sulphuric acid, of itself an excellent application to most soils." In gardening, and especially on the light lands commonly used for that purpose, this compost is one of the most convenient to use, quick in its effects upon the plants to which it is applied, and yet permanent in its results. The farmer cannot exercise too much care in this branch of his industry, for none of his labors will more amply reward him, or produce to him more gratifying results, than those which he bestows upon his compost heap of *muck and bones*.

FARMING AND BOOT-MAKING.—In giving an account of the late shoemaking strike, the Editor of the *Boston Cultivator* makes the following statement:

"We have in mind a first rate bootmaker that followed the business until his health failed him—his only choice being between an early grave and farming. He somewhat reluctantly chose the latter, and having been brought up on a farm, as was his wife, was successful, and in the course of ten years, found himself possessed of property worth $5000, with health improved, and with an apparent lease for a long and happy life amid a large and thriving family. Had his health permitted of his following the employment of bootmaking, he would not have abandoned it, and would, probably, have reached life's terminus just about even with the world. Now if he lives to the age of threescore and ten, he will, according to present prospects, possess a real estate worth $20,000, besides having trained up and educated a large family."

ICE WATER.

If the reader is down town or away from home on a hot day, and feels as if it would be perfectly delicious to have a glass of lemonade, soda water or brandy toddy, by all means let him resist the temptation until he gets home, and then take a glass of cool water, a swallow at a time, with a second or two interval between each swallow. Several noteworthy results will most assuredly follow.

After it is all over, you will feel quite as well from a drink of water, as if you had enjoyed a free swig of either of the others.

In ten minutes after you will feel a great deal better.

You will not have been poisoned by the lead or copper which is most generally found in soda water.

You will be richer by six cents, which will be the interest on a dollar for a whole year!

You will not have fallen down dead from the sudden chills which sometimes result from drinking soda, iced water, or toddy, in a hurry.

No well man has any business to eat ices or to drink iced liquids in any shape or form, if he wants to preserve his teeth, protect the tone of his stomach, and guard against sudden inflammation and prolonged dyspepsias. It is enough to make one shudder to see a beautiful young girl sipping scalding coffee or tea at the beginning of a meal, and then close it with a glass of ice water; for at thirty she must either be snaggle-toothed, or wear those of the dead or artificial.

Fresh spring or well water is abundantly cool for any drinking purpose whatever. In cities where water is artificially supplied, the case is somewhat different; but even then there is no good excuse for drinking ice water, because, even if the excuse were good in itself, the effects on the stomach and teeth are the same.

Make a bag of thick woollen doubled, lined with muslin; fill it with ice; have in a pitcher an inch or two of water above the faucet, and let this bag of ice be suspended from the cover within two inches of the surface of the water. The ice will melt slowly and keep the water delightfully cool, but not ice cold. A still better effect will be produced if the pitcher is also well enveloped in woollen. Again, water almost as cool as it can be, unless it has ice actually in it, may be had without any ice at all, by enveloping a closed pitcher partly filled with water, with several folds of cotton, linen or bagging, and so arranging it that these folds are kept wet all the time by water dripping from another vessel, on the principle of evaporation.—*Hall's Journal of Health.*

For the New England Farmer.

FARMING AS AN AVOCATION.

FRIEND BROWN:—It has been a long time since I have contributed anything to the *Farmer*, though I have been a constant reader, and, I trust, have read with profit. I look forward with much interest to your monthly visits, and am sure ever to find something that is new and much that is valuable.

The profitableness of farming has been fully discussed in the *Farmer*, but it is still a mooted question. Much may be said, both for and against. Science has much to do with farming, but farming is, by no means, to be ranked among the certain sciences. The modes of culture—the methods of procedure, are almost as numerous as the operators. In farming, as in other vocations, while one man will get rich, another with equal zeal and industry, and under equally favorable circumstances, will become poor.

It is safe to conclude, then, that in husbandry as in government, that system which is best administered is best, and that Pope's distich, whose orthodoxy, as applied to matters of religion, may well be questioned, is true when applied to the tillers of the soil:

> "'Bout modes of faith let graceless zealots fight
> His can't be wrong, whose life is in the right."

There is a great deal of thrifty farming still, even in New England. Agricultural societies and papers have done much by diffusing information and awaking a spirit of inquiry. Multitudes have got out of the old ruts and are driving on prosperously in the highway to thrift. But the masses are still plodding along in the old paths which their fathers trod.

The prejudice against "book-farming has not been entirely removed. Multitudes scratch the surface of their grounds, instead of plowing it; plant four acres, when they should plant but one; put a bushel of manure *in the hill*, when they should spread a cart-load evenly over the *whole surface*; manure for the crop, when they should manure for the land and the crops; look for immediate returns, when they should rather look and labor for the future, embracing five, ten or twenty years; dodging about among stumps, rocks and bushes after a scanty crop of poor grass when by a little resolution, and one-half the labor, they might enjoy the pleasure of cutting a good crop of good grass from a smooth surface; plunging annually into a quagmire and tugging and floundering among bogs to secure a few loads of sage grass, so sour as to ruin the dispositions of their cattle, to say nothing of their physical condition; when this same swamp might and should be made the most valuable and productive land on the farm, and contribute largely to the improvement of all the rest; and so on to the end of the chapter, showing that the work of improvement is not all done yet. But the leaven is at work, and I hope and trust that you and your coadjutors, who are diffusing your light broadcast over this fair land, will not be weary in well-doing.

The farming prospects hereabouts are decidedly good. Of grass there is an unusually large crop. Winter grain about middling. Spring grain uncommonly good. Wheat and oats never looked better. By the way, wheat is becoming a staple in this region. Thirty years ago it was as rare to see growing wheat, as now it is to see flax. Now most of the farms in this valley have a plat of either winter and spring wheat. It is found that wheat may be grown as easily and surely as rye, and with about double the profit. Land that will produce good corn will bear wheat.

Apples are abundant; and what is remarkably gratifying is the fact that our old enemies, the caterpillars, have entirely disappeared. I have not seen one this season, and the webworm, which for a few seasons past has made such terrible havoc, has also left us, and those disgusting fillibusters, the cut-worms or the army worms, have likewise taken offense and left us, mayhap to turn up in Central America about this time.

Yours, &c., R. B. H.

Amherst, Mass., 1860.

A NEW MOWING MACHINE.

A few days since, Mr. O. HUSSEY, of Baltimore, sent us a mowing machine of a new and peculiar construction for trial. It has two driving wheels, each about two feet high, is exceedingly compact and simple, having but very little machinery about it, the whole machine occupying a space only about three feet by two. It is intended for one horse, and has a cut of three feet.

On the first day of August, Mr. Hussey came to our farm to set it in motion, and in a few minutes it was ready, and performing its duty in the field. At first a ten hundred horse was attached to it, and driven round an acre three or four times. Then an *eight* hundred horse was hitched to it, and the acre finished. The draft did not seem too heavy for the lightest horse, and the grass was cut well, although badly lodged in some places, and quite wet with the rain of the previous day. The ground was meadow, and rather soft. The trial was entirely satisfactory to Mr. H., and gratifying to the spectators. The machine had never been used before, with the exception of a *thirty* minutes use when first put together. Its weight is about 450 pounds, and Mr. Hussey thinks it can be sold when it has received some improvements suggested by this trial, for $75, and perhaps a little less.

There is a steady advance in the ability and value of this important labor-saving machine. Some of the early ones had wheels, and cogs and metal enough in a single one to make two or three of this, and then were without half its effective power. The idea that a good mower must weigh seven or eight hundred pounds has gradually given way to the practical tests of the machine, and, at the same time that they have been made lighter, friction has been reduced so that only about one-half the power to draw them is now required. With two or three changes in Mr. Hussey's machine, unimportant in cost, we think it will compare favorably with the best in our knowledge.

THE WOOL CROP OF 1860.

The *Shipping List* of the 8th inst., in speaking of the wool crop, says:—

We have several times alluded to the high prices paid for the new clip in the producing districts, and the following from Walter Brown's New York Circular of August 1, confirms our statements made at the time, as follows:—"The month of July has been characterized by an unprecedented competition in the producing districts; so great has been the eagerness among buyers to secure a portion of the clip, that in many instances far above the real value of the wool was paid, and in some particular cases, several cents per pound higher than the ruling prices in the Eastern markets for the same grades. This irregularity arises from the disposition on the parst of some agents to secure their commissions, regardless of the interests of their employers; very much to the injury and disadvantage of more judicious purchasers. It also operates directly against the more liberal and enterprising growers, for these variations are almost always on lots of low and ill-bred wools. From all the information we have obtained, it would appear, that the average price which has been paid for the clip throughout the country will range from 1½ to 2c per. lb. above that of 1859. In this State the average is thought to be fully 2c above last year, and in Ohio the excess is quite as great. In some localities wool was picked up in smaller lots at prices quite as low as last season, and in some very early districts, perhaps even lower. It remains to be seen whether or not the markets will justify this advance. To yield our dealers even a fair commission for handling the wool, the ruling figures must be from 3 to 5c above the average prices obtained last season. During the month, prices of such desirable domestic wools as remained in market, both fleece and pulled, advanced from 2 to 3c per lb., and with very few exceptions these lots were taken by consumers; and about the same advance on last year's prices has also been realized on some lots of new wool. As the prospects for fine crops throughout the entire West are very flattering, and the promises for a good Fall and Spring trade quite encouraging, and as our Woolen Mills are all running, we may look for an active season in the raw material. The fact that so many of our manufacturers were willing to go forward to the country and pay high prices for a year or a half a year's stock of wool, is an evidence of their confidence in the future demand for their goods, which, though somewhat at variance with the impression which has heretofore recently prevailed as to the remunerating character of that important branch of industry, is nevertheless very gratifying."

THE CATTLE DISEASE.—Inquiries are frequently made of us in relation to the cattle disease; as to what its present condition is. We have the pleasure to state that very few new cases are reported to the Commissioners, and that the probability is that there will not be many during the summer months. We learn, from various sources, that where the disease has raged in Europe, it shows itself but little during the summer season. It will be exceedingly fortunate for us if it does not assume a new type as the cold weather approaches.

The Hon. Adam Ferguson, a distinguished farmer at Woodhull, Canada West, in writing to Mr. Secretary Johnson, of the N. Y. State Society, says: "The Massachusetts Legislature have done themselves great credit; and the trading public are greatly indebted to you all, delegates, &c. My friend, D. Henderson, is professor of Pathology in the University of Edinburgh, and is in high medical practice. He assured me that *Aconite* was used as a specific, if given in time, *before* the lungs were seriously affected, and that he had saved scores of valuable cows." A watchful prudence, we trust, will prompt all to be careful, however little they think they may be exposed.

EXTRACTS AND REPLIES.

THE CROPS IN WINDSOR COUNTY, VERMONT.

I frequently see accounts of the crops in various sections of the country, and I thought some of your readers might be interested to hear about the crops, &c., in Vermont, especially in Windsor county. As it was very dry through the months of April and May, people generally anticipated a light crop of hay and grains, but the wet weather through June and July has allayed our fears. Hay, so far as I have had opportunity to know in this section, will be an average. We are now in the midst of our haying. Wheat, oats and barley promise good crops. Corn and potatoes look well. We shall get a larger crop of fruit than we have for several years. Apple and plum trees are well loaded and an abundance of cherries. We have frequent rains which keep the ground moist, so that vegetation comes forward very rapidly and retards haying, but the grass is green and growing yet.

Can you, or any of your correspondents, inform me where the genuine Norway Rag Scythe Stone can be obtained, and at what price per dozen?

Andover, Vt., July 30, 1860. G. W. PUTNAM.

REMARKS.—We have inquired of Nourse & Co. for the Rag Stone, but they have none on hand at present. The price is from 75 cents to one dollar per dozen.

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CULTURE OF WHEAT.

Wheat will grow in Massachusetts as well as elsewhere. Of this I had ocular demonstration on the grounds of Gen. WM. SUTTON, bordering on Aborn Street, this morning, Aug. 1. His crop now stands full five feet high on an average, with heads as plump and well filled as can be desired. No blight or insects of any kind about it. Should nothing occur to injure the crop, I should say the prospect was fair for thirty bushels to the acre. The seed was raised on the same land last year from some that grew in California. The lesson I draw from this culture is, be sure to obtain good seed, and you can be certain of a good crop. If any one doubts this, let them examine the field.

Aug. 1, 1860. P.

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MANURES.

Will you inform me what is the best preparation sold for the manuring of dwarf pears, peaches, cherries, grapes and strawberries? and is it advisable to use any one article for the various kinds named above?

Aug. 2, 1860. D. W. H.

REMARKS.—We cannot inform "D. W. H." as to what *special* manure is best suited to the particular plants he names. The *best* manure is undoubtedly the

manure of the stable or barn. A good dressing of ashes will be excellent for them, and especially so for the grapes. The peach does not require high manuring.

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A FINE CROP OF GRASS—FOWL-MEADOW.

About the middle of August last I plowed one acre and a quarter of rather low land, and spread on, after rolling and harrowing, not a large quantity of well composted manure, then harrowed and seeded liberally with herds-grass and red-top, and then bushed it in smoothly. It came up and looked finely last fall, and this day, July 10, I have cut not less than three tons of first quality hay on it, where last year it was hardly worth cutting. Now I intend to plow another acre adjoining, but lower and wetter, and think of seeding with fowl meadow, and wish to inquire what other grasses will do best to mix with it? F. K. CRAGIN.

Woburn, Mass., July 24, 1860.

REMARKS.—If you mix other grasses, we know of nothing better than herds grass and red top. But why mix other grasses with the fowl meadow? The latter will cover the ground, bring you a valuable crop and continue itself for many years, if you allow a portion of it to ripen and shed its seed upon the ground.

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SEASON AND CROPS IN NEW YORK.

The season has been favorable for farmers; though it has been rather dry, the crops look promising. The wheat is being harvested and we hear very little of the midge—all the hoed crops look well. Peaches are a failure in some portions of western New York, but in some localities a good crop. Apples a full crop. Pears abundant. All the small fruits have fruited and are fruiting abundantly, and farmers are surrounding themselves with these cheap comforts, which tickle the palate and "make glad the heart of man."

Lyons Nursery, N. Y., 1860. SYLVESTER.

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THE BAROMETER.

Have you a barometer in your house, or do you know of any one that has (farmers, of course,) and how much dependence can be placed on them in haying time? How good a barometer is Mr. T. R. Timby's?

WILLIAM H. SAVAGE.

Harvard, Mass., July, 1860.

REMARKS.—We have not consulted the barometer in regard to farming operations, and have no acquaintance with any person who has. We have seen articles in the newspapers, purporting to be from farmers, that speak of the barometer as of great value to the farmer, and especially so in haying time.

THE GREAT COMING GRAIN CROPS.

The London *Times* forebodes trouble in England, owing to bad weather, and consequent short crops. The prospect of the grain crops in France is also said to be unpromising. On the other hand, the cereal crops in the United States and Canada never promised better. A larger crop of wheat than we ever had before, by perhaps one-fourth, is now secured, or in the process of harvesting. The crops of hay and oats are also large, and the promise of the king of our cereals—Indian corn—was never better. Nothing short of a large export demand can keep the price of this abundant cereal from falling below remuneration to the grower. Of the last year's crop, it is said that the large farm cribs of Illinois are still nearly full of last year's corn, yet the receipts at Chicago have averaged over 100,000 bushels a day from the Illinois canals and railroads through the season.

The wheat crop of Western New York last year was of better quality and yielded more to the acre than it had done before in twenty years. Thus encouraged by the exit of the midge, a much larger breadth of wheat was sown last fall, and a glorious crop, unspoiled by the insect, is now being well secured.

The effect of such increased cereal crops is not only to encourage and enrich the farmer, but to give life to trade generally, and to the shipping interest in particular, which has been so long depressed, both on the ocean and the lakes. In the region of Lake Michigan in the fall of 1858, vessels bought salt and coal from Buffalo for ballast, gratis, and then had to load back with wheat at three cents a bushel; now the freight on corn and wheat from Chicago and Milwaukie to Buffalo, is about seven cents a bushel, with the prospect of advancing rates when the new wheat crop comes in, and the lake risks are increased.—*N. Y. Times.*

A NEW TRIAL OF AN OLD MACHINE.

On Friday, Aug. 3d, we had an opportunity of looking at the operations of one of Nourse, Mason & Co.'s *Ketchum Mowing Machines*, on the farm of J. B. SHURTLEFF, Esq., of North Chelsea, which lies about four miles from Boston. The field was favorable for the work, and the grass standing upon it varying from one and a half to two tons per acre. Before any other person had arrived upon the spot we paced the piece to be cut with as much accuracy as possible, and found it to contain one hundred and eighty rods, or one acre and one-eighth, and this was cut admirably, in *twenty-seven minutes*, or at the rate of an acre in *twenty-four minutes!* The weather was excessively hot and close. The same team, machine and driver operated upon an adjoining piece of land the day before, which was cool, with a fresh, elastic breeze, and we were assured by Mr. Shurtleff, and several of the bystanders, that an acre was cut, and the work handsomely done, in *fifteen minutes!* The knife-bar was six feet long, so that the swath averaged about five feet and six inches. The horses, a noble pair belonging to the farm, started off on a brisk walk, and so continued until the whole piece was cut, pausing only a moment, twice, to clear a rock or some other obstruction.

This item of mowing is one of some consequence to Mr. Shurtleff, as he will cut some *two hundred and fifty tons of hay this year*, will thresh out between *four and five hundred bushels of rye*, and sell *one hundred thousand heads of cabbages*, to say nothing of a world of other stuff that the people in the city which he overlooks hunger for every day.

Our stay was too brief for visiting his stables, and various other parts of the farm, and looking into the details of his extensive operations. That pleasure is left for a future opportunity, which we

hope soon to improve, and then will tell the reader what we see and hear.

Some of the stereotyped anti-progressionists in our midst would find profit in visiting Mr. Shurtleff's farm, if they would listen to his words while "toting" them over his broad acres in his easy wagon!

BORING ARTESIAN WELLS.

The greatest bore of any artesian well in the world, is said to be that just completed in Birmingham, England. The diameter fixed was the unprecedented one of twenty-six inches, and was accomplished by new and improved machinery. The machine thus employed is described as consisting of a very heavy bar of cast iron, armed at its lower end with a number of cutting chisels, and suspended by a rope, which was in connection with a steam engine at the mouth of the well. As it is wrought up and down by the engine, the tension of the rope gives a circular movement to the bar of iron sufficient to vary the position of the chisels at each stroke of the instrument. The apparatus of some well-borers has around the chisels a cylindrical chamber, which by means of single valves, receives and retains the abraded portions of the rock. This chamber, which would not hold many pints, had, of course, to be raised to the surface at short intervals for the purpose of being emptied of the debris, thus involving much loss of time. But, by means of the improved machine, this operation is performed in a very different way. A cylinder is employed, eight or nine inches in diameter, having a piston fitted to it so as to form a pump, with one valve at the piston and another at the bottom of the cylinder. When the pump sinks to the bottom of the well, the piston, by its own gravity, sinks also to the bottom, and suddenly reversing the engine and drawing up the sucker, not only is the crushed debris drawn up, but also pieces of rock, six or eight inches in diameter. By this means, six or seven tons of matter are drawn up per hour.

For the New England Farmer.

PLUMS---COE'S GOLDEN DROP.

MR. EDITOR:—Having had some conversation with you respecting the plum culture, I send you herewith a specimen of what *my* plums promise to be the present season. It is a small branch, broken by the weight of the fruit. You will perceive that the curculio has made no impression upon it; and it does not look as though this most delicious of all fruits (in my estimation,) is in any particular danger of "subsiding," in this region, as some croakers have predicted. This specimen is a fair sample of two trees of the kind (Coe's Golden Drop,) in my garden; and I have other varieties equally promising.

Last year I had very few plums on account of the curculio; but I took especial care to shake off the bitten fruit and bury it "too deep for resurrection," before the maggot left it to go into the ground. This season, very little of the fruit has been bitten by the curculio. I believe this pest can be eradicated, provided fruit-growers will act in concert, and take sufficient care to destroy the punctured fruit for a few years in succession.

As to that other strange pest of the plum tree, the black wart, I know of no better way of overcoming it than the one I have pursued—namely, by applying the knife freely whenever and wherever it makes its appearance. I have thus far been able to keep it down, though at the expense of disfiguring some of the branches of my trees. I am inclined to believe that it is caused by some insect that bites through the bark and deposits an egg, which, turning to a maggot, poisons the sap, and causes it to exude and form a fungus around the spot. By cutting into the fungus or wart, you will almost always find a little worm, and, though I am not fully satisfied on the point, I think the theory is a plausible one that the worm does the mischief. E. C. P.

Somerville, Aug., 1860.

REMARKS.—Nine beautiful specimens of *Coe's Golden Drop* on a single twig scarcely quarter of an inch in diameter—more fruit than we have on three good-sized trees.

For the New England Farmer.

TWADDLES AND WADDLES ON AGRICULTURAL EDUCATION.

[Continued from page 411.]

Waddles.—The dead languages and the higher mathematics certainly would be useful to some classes of pupils as much as agriculture would be to others. Each should study, as well as practicable, what may be called into requisition in after life, and not what would be unlikely to be. Nothing hardly could be more improper than forcing a complete system of agriculture into our schools, as has been recommended—not only into those of the rural districts, but into those of our large towns and cities, and among children of both sexes—which would not only embrace chemistry, botany and vegetable physiology, but also the "raising of stock!" One gentleman of the Board of Agriculture, (in his undefined zeal to do something for the cause,) gave it as his opinion, that the question, "What was the best *bull*," was very proper to introduce into a promiscuous school of children! These studies are useful, but they have their time and place. It might be equally proper to teach them from the *pulpit*; for if there is much that is useless taught in our common schools, no candid and unprejudiced mind will deny that the former institution is less open to the same objection.

Twaddles.—Shocking! But certainly you can have no objection to the schools teaching how plants grow and are fed, for our life as a people depends upon this knowledge.

W.—No, I have not. Some attention should be given to the subject, by those who desire it, and such is in fact the case now. But I object, as before hinted, to shaping the minds of youth in our common schools either to this or that calling, exclusive of others. Probably no one of the Board of Agriculture would submit to it in regard to his own children. It is a matter of domestic concern.

T.—Bless you, Mr. Waddles, they do so in England, and see what crops they raise!

W.—True; but in this republican country the

government are not permitted to exercise that control over the laboring classes that it does there. England has a queen, and an order of nobility; but the practical farmer is far from being comprised in this latter department; and their agricultural schools are the ordinary schools for the farming class, who expect to be forever so, and trained expressly for that calling, with no hope or hardly the bare possibility of rising into the dignity of small land-holders, or of citizenship. I ask you if the true object of agriculture is fulfilled in a country like that, where, though they *may* get greater crops than we do in some productions, these crops, by the stern forcing system of large capitalists, are wrung from the bodies of the thousands of half-housed and half-famished farm laborers? English crops, produced (shall I say by human bone-manure?) as they are, ought perhaps to be regarded as disreputable to the British Isles. England, probably, has more to learn of us than we of her, not only in agriculture, but in politics and law, and perhaps in all the industrial pursuits. English farming is not so much "capital and science," as capital and oppression.

T.—But we propose here to get the science without the oppression. You are probably aware that a committee of gentlemen of the Board of Agriculture have given it as their opinion, that if a system of agricultural education were introduced into our common schools, in twenty years "the productive value of the lands throughout the whole State would be doubled."

W.—I am; and I have great respect for the gentlemen. But it is to be *very much questioned* whether the enlightened practical farmers of the State would affirmatively respond to such an opinion. Whoever has heard of the eccentric merchant of Boston, who, one bright morning before breakfast, made two thousand dollars by *marking all his goods higher*, may have the story brought to mind.

T.—That's a joke.

W.—Isn't the other?

T.—That's to be seen. But, Mr. Waddles, just think of the millions of dollars added to our agricultural products if we were to succeed in raising the enormous crops they do in England. You must admit that now the difference is a loss on our part.

W.—Not at all. We gain it in the freedom and happiness of our agricultural population. If farming is ennobled anywhere, it is and must be in America. If the mass of our farmers had an annual rent which must be paid for their farms, like the tenants of England, they might be hard enough to force greater crops. But fortunately they are under no such necessity. Yet of what crops they do raise, they take enough *to supply their own wants*, which cannot be so well said of the tillers of the soil whose "science in husbandry" we are required to emulate. Surely, if England is the land of bountiful harvests and fat cattle, it is also the land of lean and disfranchised laborers. Probably agriculture may be better taught to a few in Britain than in America; but with what we do teach here, we also inculcate the *science of humanity*, and the divine maxim, that "The laborer is worthy of his hire."

T.—True. No one should shut his eyes to the many laboring poor in England, and throughout Europe; but then we should only copy the good.

W.—But of this we feel no necessity. If our general system of agriculture is more productive of happiness than theirs, we may not be very ready to copy from them; though, perhaps, there are no important agricultural experiments instituted in that country, which do not have more or less influence in this. But the ill-defined idea of establishing an agricultural college from foreign hints, with a view of advancing agriculture into one of the learned professions (considering the little harmony and unity among those already counted *learned*,) has always struck me as tending to the ridiculous. And if the working farmers of Massachusetts were and are not similarly impressed, the enterprises already started with great names would not have suffered an early blight. When they ask for manure, will you give them a college? Scholars always make a foolish piece of work in trying to improve that which is already well enough; and hence it is that the common sense of the people will not respond to them. They would "paint the lily," and "throw a perfume on the violet." And they are too apt to think that a man who springs up like a Bartlett or Seckel pear, and can bear good fruit in any soil, is a fit subject for their influence. Washington and Franklin, who belonged to no learned profession, will be remembered when Adams and Jefferson are forgotten. Very much depends upon the character of the man himself, as to his success, whether in agriculture, or in any other business.

T.—Yes, sir; I readily grant this; but the American farmer's knowledge, although sufficient in quantity, is not systematized, and our agricultural college or schools, I am quite hopeful, would supply this great defect. Besides, such an institution would give tone and character to the agriculture of the State, and, properly managed, would greatly redound to its honor.

W.—I do not readily perceive how such a school could systematize (rather a vague term,) our knowledge, for it could only bring good sense to bear on what is generally known from year to year, and this every sensible man can do himself. Much, however, would depend upon the character of the teachers. If they, in fact, were wiser than the best farmers, they might accomplish something; but it is not to be supposed that practically they would be. If they were merely learned in chemistry, and the collateral branches of agriculture, merely theoretical, speculative men, and intended to try experiments, then their operations would be very expensive, and of doubtful utility, and they could not be regarded as representing agriculture in its best eclectic attitude. If they inculcated what they thought the most scientific for the time being, then their teachings (so freaky and delusive has agriculture occasionally shown itself ever since the ground was cursed for Adam's sake!) would be in danger of becoming *systematized ignorance*. They undoubtedly would do something, and the probability is, that some leading, ambitious spirit among them would seize the reins, intimidate the rest by the crack of his whip, and—"go it blindly." Prof. Porter's ideal extravaganza of uniting the hydrogen of the ocean with the nitrogen of the atmosphere, to form a universal, inexhaustible, omnipresent fertilizer, might not be realized; the potato and cattle diseases would probably fare no worse, and

the curculio, and all the mischievous members of entomology, would very likely commit their ravages as if in utter ignorance of such an institution.

T.—Not at all, Mr. Waddles. I should anticipate a good degree of harmony. We hear nothing of the kind in the European schools.

W.—But we know that the scientific men of Europe do not agree upon those very matters which an agricultural college ought to teach. Our agricultural professors, perhaps, would be as wise as our present Board of Agriculture; no one, probably, thinks they would be wiser; for they are the most eminent men in their calling, selected from all parts of the State. Yet does our Board do everything harmoniously and satisfactorily? It is not to be expected, though a hindrance. The only thing which I ever heard of their being unanimous about, was upon the resolution to petition the Legislature to introduce a system of agriculture into our common schools. So said one paper, at least. The Secretary's Report says, "almost" unanimous. Yet with all this unanimity, only two of them appeared to discuss the subject at the Legislative Agricultural Meetings. And that's the last I have heard of the matter. On the whole, I am inclined to believe that a faculty of professors would not be able to permanently advance the cause of agriculture, and would not throw more light upon the subject of vegetation than some of our best farmers—so difficult is it to find and tread a path not already beaten.

T.—Well, then, I must say it would not be properly managed. They ought simply to teach what are regarded as the best methods of soil culture.

W.—That is, the system well known.

T.—Nothing more nor less.

W.—But who would go, or send a boy to a school to learn that which is usually known and practiced among farmers? A purely agricultural college on this basis, would fail for want of patronage, as a lad would go on to a well-managed farm and earn his livelihood. If of a general, scientific character, scholars might attend, but not to learn farming, as they have at the Michigan Agricultural College.

T.—But I proceed upon the presumption that it be properly instituted, and well managed. What that would be, I frankly confess I can't at present say.

W.—Again, Mr. Twaddles, I am inclined to the belief that such an institution would be more *political* than agricultural, especially if endowed by the State, with the Governor and Council holding the appointing power. Would such an institution give tone and character to agriculture in Massachusetts? And provided it were all its friends could wish, and was not, as some think it would be, a useless expenditure to the State; that it fulfilled its mission, and was an honor to old Massachusetts; would you not feel prouder to point out to a foreigner, a hardy, independent, well fed, well clothed and well housed yeomanry, than to a stupendous and successful agricultural college?

T.—Certainly, I should; but I would prefer to do both. Yet how do you propose to educate farmers—not by merely drudging on the soil—toiling, sweating, eating and sleeping—all hand-work, and no head-work?

W.—By reading, reflection, in connection with the farm, and by seeing what others have done. Surely, no man need be at a loss for books and papers. In Great Britain, where it is said not so many agricultural journals are in circulation annually as are struck off by a single press here, farm schools or colleges may be more important. With so many facilities as we have here in Massachusetts for improvement in the cultivation of the soil, I should consider the establishment of an agricultural college as an act of supererogation—merely a fifth wheel to a coach, upon which some of the larger insects would fasten, and marvel at the dust they raised. Men working their own farms would shout in derision at it, and half of the agricultural journals would wage a perpetual war against it and its management. The animadversions upon the Patent Office doings and Reports, in this department, may give us some hints. And here I may observe, for want of a better opportunity, that M. Lavergne freely admits, in spite of the agricultural schools of France, the superiority of British husbandry.

T.—Well, you can think as you choose; but I still go for more head-work, and less hand-work.

W.—Yes; but knowledge must be executed. Much head-work is too apt to make mere fancy farmers, and as you must know, has been the ruin of many. The Board of Agriculture could point to you instances of such, perhaps in its own circle. A knowledge of chemistry, botany and geology, will not hoe one's corn, or dig his potatoes. Then again, when a farmer becomes learned and somewhat refined, he is very apt to leave his manure fork to harder muscles and coarser brains.

T.—Yes, sir, so he is; and that's the reason why we need to make agriculture more attractive, by some method or other, to keep the young farmers at home.

W.—Pray, how can you talk so when your own example has been against it? Some men will make farmers of some of their sons, but would you do it? I question whether there is a single member of the Board of Agriculture that would forcibly encourage a bright boy of his to engage in farming; and perhaps he thinks there is no necessity of it. You know very well, that an ambitious lad who has been reared on a farm, longs to quit it, and go out into the varied world, and try his fortune. It is all very well. Such as he may return some time or other, with capital and contentment to remain. But if they do not, the presumption is that they choose to remain away. Then there are some who had rather remain at home, having no taste to battle for a livelihood in the checkered throng, or to become a merchant, minister, or tin-peddler.

T.—But if we educate the farmer as we do some other classes, the ambition of nearly all would be to remain in agriculture. Why should not the farmer know as much as the clergyman?

W.—He certainly does of his calling, and may have as much native sense. But an extended rudimentary education will not save young farmers where the certainty of a life of hard labor is before them; and if it did, what would become of all the educated farmers? Learned professions are apt to be overstocked.

T.—Go to the West, on the new lands.

W.—Yes; land is too dear, and rapidly becoming otherwise occupied in Massachusetts for them;

but there they might increase too fast for their own advantage, and the profitable sale of their crops. So there is some danger in this line of argument. Now I go for a free egress and ingress in regard to agriculture; and I am inclined to believe that it will well regulate itself in all its important relations, and that no one need feel alarmed that competent hands will not be found to till the earth. But you perceive this subject is endless.

T.—Well, *your* plan, so far as study is concerned, ought to be designated, "Farming made Easy!"

W.—Thank you for the honor. So important a calling in the progress of civilization ought to be made easy, not complicated; and blessed is the man who confines agriculture to the fewest simple rules, so that the honest, industrious young man, with comparatively small means, who intends to pursue it, may not be obliged to labor through a term of two or three years of misty and fallible science before he can engage respectably and profitably in that universal labor calculated to insure his happiness and feed increasing millions.

Oak Cliff, on the Mystic, July, 1860.

HORNLESS CATTLE.

A correspondent of the *Rural New-Yorker* closes a strong commendation of Polled Breeds with the following paragraph.

Some few acquaintances have suffered utility to take the place of horns amongst the cattle, and are rejoicing at the progress in their change of fancy, as they can see beauties in good cattle without horns. One yard confines together within an area of less than 50 by 80 feet, well sheltered and watered, seven hornless cows and heifers, and sixty valuable Cotswolds, that would not be suffered for a moment to be in like condition if the cattle had horns. They are harmless, social and peaceable, as if all were sheep, and the owner frequently passes amongst them in the dark without fear of running upon even a "short horn," and feels quite sure none of them will die in the spring with the "Horn-ail." His feed boxes are so constructed, that a cow or sheep cannot get the others' fodder, although within the same inclosure. His judgment and fancy have become so bewildered by their smooth, innocent, harmless-looking heads, that he thinks there is not so much beauty and value in any other seven cattle, of the same age, belonging to any other yard in town. But enough. I wait to learn if any body can say sufficient against well-bred "Moolys" to subject them to any real disrepute whatever.

Wool Trade in Michigan.—It is stated in the Detroit papers that the clip of wool for this year will exceed that of last year by about a quarter of a million of pounds. Last year's clip was estimated at 3,000,000 pounds, and allowing the clip to be this year three and a quarter millions of pounds, the income of the State will be about a million and a half of dollars. The gain to the State by the increased production and the increase of price is estimated at one hundred and ninety million dollars.

For the New England Farmer.

WINTER WHEAT.

Mr. Editor:—It would be very interesting to know the general success of those farmers of New England who have been raising winter wheat the past season. Abundant crops must have been secured, judging from the season which has been so favorable to all cereals in your region. The success of one farmer should certainly stimulate another, and I know of no better mode of communicating it than through the medium of your valuable paper. To those who doubt, it may induce them to begin, and to those who may be indifferent, it might prove a spur to their negligence, for they all believe, or ought to, that it should be one of the most important farm crops of the New England husbandman. No farmer among you should allow himself to buy a barrel of Western flour. He can raise wheat for one dollar a bushel, or as cheap as he can raise a bushel of rye. Four bushels of wheat is equal to a barrel of flour for his family, and should there not be mills to bolt so close, wheat meal is far more healthy for his family. Perhaps some of your dyspeptic readers can answer.

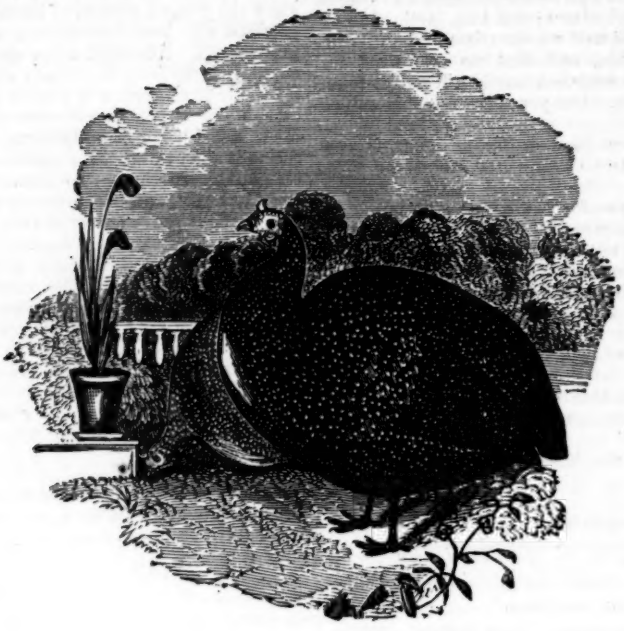
Take that piece of mowing field that needs to be turned over, salt your wheat in pickle twelve hours, roll it in ashes or lime, and get it in the last week in August or first week in September, as deep as you can, to insure a good root, which makes it doubly secure against winter kill, and the farmer will be as sure of this crop as he is of his winter rye. These refreshing rains are preparing an excellent fallow or second crop for plowing in. Again, Mr. Editor, I want your farmers to tell us what they are doing with winter wheat.

H. Poor.

Brooklyn, L. I., Aug., 1860.

Remarks.—It affords us sincere pleasure to state to our zealous correspondent that his repeated promptings, or *something else*, have resulted in numerous fields of as fine looking wheat as we ever saw, in various parts of New England. It is now, August 9, being harvested without any sign of midge, mildew, or anything else to lessen its value.

The Sound of Growing Corn.—Did you ever *hear* corn grow? You have probably heard the remark, "our corn grows so fast that you can hear it." That is supposed, by people who don't know, to be a figure of speech only; but the remark cut here is a literal fact. Go into one of these "bottom" corn-fields forty or fifty rods on a warm July day, or August night, when a bright moon is up (for vegetation grows faster in moonlight than in darkness,) and a few hours after a heavy shower that has fairly wet the earth, and waked up the drowsy corn to its influences, and as the main stalk stretches and swells in its new strength up through the contracted lips of the upper blades, they crack and burst around you like the stifled reports of ten thousand rifles! That corn field will be some inches higher at sunrise the next morning than at the last sundown. There is no mistake about it. *We have heard corn grow*, many a time, and so every farmer along in the Sciota valley will tell you.—*Corres. N. Y. World.*



THE GUINEA HEN.

The plumage of this bird is singularly beautiful, being spangled over with an infinity of white spots on a black ground, shaded with grey and brown. The spots vary from the size of a pea to extreme minuteness. Occasionally the black and white change places, causing the bird to appear as if covered with a net-work of lace.

Of all known birds, this, perhaps, is the most prolific of eggs. Week after week, and month after month, see little or no intermission of the daily deposit.

A Bantam hen is the best mother, being lighter, and less likely to injure the eggs, by treading on them, than a full-sized fowl. She will well cover nine eggs, and incubation will last about a month. The young are excessively pretty. When first hatched, they are so strong and active, as to appear not to require the attention really necessary to rear them. Almost as soon as they are dry from the moisture of the egg, they will peck each other's toes, as if supposing them to be worms, will scramble with each other for a crumb of bread, and will domineer over any little Bantam, or chicken, that may have been brought off in the same clutch with themselves. No one, who did not know, would guess from their appearance, of what species of bird they were the offspring. Their orange-red bills and legs, and the dark, Zebra-like stripes with which they are regularly marked from head to tail, bear no traces of the speckled plumage of their parents.

When designed for the table, they must be killed before coming to maturity, as the flesh then becomes tough and dry.

By their continual clamor and watchful nature, they are useful in protecting the other poultry from the hovering hawks.

CURIOUS ALLEGED DISCOVERY IN FLORICULTURE.—It is said that Mayor Tiemann, at his paint factory in Manhattanville, has accidentally made a discovery which threatens to revolutionize floriculture. One of the factory hands having thrown some liquid green paint of a particular kind on a flower-bed occupied by white anemones, the flowers have since made their appearance with petals as green as grass. The paint had in it a peculiar and very penetrating chemical mixture, which Mr. Tiemann has since applied with other colors, to other plants, annual, biennial, and of the shrub kind—the result being invariably that the flowers so watered took the hue of the liquid deposited at their roots. By commencing experiments early next year, during seed time, and applying different colors, we shall no doubt soon be enabled to "paint the lily," which was Solomon's ambition.—*N. Y. Tribune.*

For the New England Farmer.

ADVANCE OR RETREAT?

MR. EDITOR:—It is admitted by all, I believe, that we live in a remarkable age. But whether our age be distinguished above all others for its advancement and progressive improvement in all departments of knowledge, or whether, in some respects, we have receded and fallen behind other ages, is a mooted question among farmers in our vicinity. Farmer A, who stands at the head of the alphabet, who is the oldest man we have among us, and who ought to know as well as others, boldly and confidently asserts, that our age is more eminently distinguished for shams and humbugs, than for any thing else. He says, that his great progenitor and namesake, Adam, exhibited more real scientific knowledge in giving names to the animal creation, than is now possessed by any one man on the face of the globe; and, in fact, that it is quite doubtful whether mankind, on the whole, have made any great proficiency in scientific knowledge. Farmers B and C, his two nearest neighbors, and equally venerable for their age and sagacity, coincide with him in opinion. Farmer D, like Wouter Van Twiller, a former Dutch governor of the State of New York, surnamed the Doubter, is not prepared to give an opinion upon the subject, but, like his illustrious predecessor, who, whenever any question of importance was proposed for his consideration, would put on a mighty mysterious, vacant kind of look, shake his capacious head, and having smoked for five minutes with redoubled earnestness, sagely observe, that "he had his *doubts* about the matter." But D is not the only doubter amongst us. There are others who, if they be not doubters, are double-minded. They have no decided opinion of their own; but they sail with the current of public sentiment in their neighborhood; and perhaps, as soon as they have given an opinion, they immediately vote the opposite.

Without pursuing this train of remarks further, it does appear to me, that there is a straight forward and progressive course; and that there is no room for doubt, for dogmatism, or for retrogression. In every department of knowledge, there are works and improvements that, not many years ago, were wont to fill us with trepidation and awe at their boldness and costliness, but are now dwarfed into absolute insignificance by the gigantic projects that come teeming from the brain of science, and the panting heart of enterprise. More improvements have been made in the arts and sciences, for the welfare and happiness of man, for the adornments and accomplishments of life, during the last fifty years, than during whole preceding centuries. Tell me not, that we have made no improvements since the days of Adam and Eve, or any subsequent period. Tell me not, that all our progenitors understood all the arts and embellishments of life as well as we. Our age is strongly marked with characteristic improvements—improvements which were unknown to the inhabitants of the world at any former period. The present exceeds all former times in invention, in intellectual, moral and physical power, and in mechanical development. That fiery, iron-ribbed camel, with its burden of thousands, dashing along with the rapidity of lightening—that mighty leviathan of the deep, whose back is crowded with living souls, and whose belly is crammed with the products of every clime and nation, marching with the speed of a sunbeam over the pathless ocean, in spite of storms and tempests, are the rich fruits of the present era's intellectual growth. And the time will soon come, when similar improvements will be introduced into all branches of business.

JOHN GOLDSBURY.

THE FAMILY.

The family is like a book—
The children are the leaves,
The parents are the cover, that
Protective beauty gives.

At first the pages of the book
Are blank and purely fair,
But Time soon writeth memories,
And painteth pictures there.

Love is the little golden clasp
That bindeth up the trust;
O, break it not, lest all the leaves
Shall scatter and be lost.

Country Gentleman.

ITALIAN BEES.

During the early part of last year the Commissioner of Patents at Washington authorized Mr. S. B. PARSONS, of Long Island, N. Y., to proceed to Italy, and inquire into the habits of Italian bees, and if, upon investigation, he found them possessing qualities of value which our native bees do not possess, to procure a certain number of swarms and send them to the Patent Office.

He entered upon the duties assigned him, and arrived in the country of the Italian Lakes in April, 1859. After wandering about among the hills of that delightful region for some months, his researches were arrested by the approach of hostile armies, and he was not able to resume them until the following September, when he met an intelligent Bavarian who had established himself in the Grisons, and had devoted himself to the culture of pure Italian bees.

The result of his researches convinced him that these bees possess qualities superior to those of our own, and he ordered for the Department to the full amount which he was authorized to expend, and directed them to be sent by the Arago on the 18th of October from Havre, but by some unaccountable delay they were not shipped until December 28th, from Genoa.

In his investigations, Mr. Parsons says he came to the following conclusions in relation to the Italian bees:

1. That they will endure the cold better than ours.
2. That they swarm twice as often.
3. That they are abundantly more prolific.
4. That the working bees begin to forage earlier, and are more industrious.
5. That they are less apt to sting, and may be easily tamed by kind treatment.

6. That the queen may be so educated as to lay her eggs in any hive in which she is placed, while the bees of such a hive, deprived of their own queen, will readily receive her.

7. That its proboscis is longer, and it can reach the depths of flowers which are entirely beyond the efforts of the common bee.

8. That a young queen, once impregnated, will continue fertile during her life—from four to seven years. This quality will insure pure broods, till the whole country is filled with them.

9. That they are far more brave and active than the common bee; will fight with great fierceness, and more effectually keep the moth out of the hive.

Having read the statement of Mr. Parsons, and learning that Mr. BRACKETT, of Winchester, in this State, a gentleman who has gained some celebrity as a skillful cultivator of several varieties of grapes,—had introduced the Italian bee into his colonies, we visited his place a few days since, and examined both bees and grapes for ourselves. In the midst of his delightful retreat, surrounded on all sides but the south by the natural forest, he nestles on the hillside with his pleasant family, his forcing houses, grapes, and other plants, and his twenty odd swarms of bees! He is full of zeal in regard to them all,—and that zeal is so admirably tempered with knowledge, that one cannot fail to gather valuable suggestions upon any of his favorite topics. Mr. Brackett was early called into consultation with Mr. Parsons, and one or two other distinguished apiarians, in regard to the course to be pursued with the Italian bees, and as a part of the policy he has introduced eight pure queens into his colonies, having first by a most ingenious device driven all the drones, or males, of the common bee from his hives. The queen of the common bee and the drone brood being taken away, and a new Italian queen introduced, the natural work was at once entered upon of forming new queen and brood cells, so that the eggs deposited by the new queen would produce the pure Italian bee!

From the experience thus far gained, Mr. Brackett is inclined to confirm the statements made by Mr. Parsons. He thinks their merits have not been overrated, and states that they are more easily managed, and less sensitive to cold than our bees.

From a little work by H. C. Hermann, the Bavarian referred to above, we learn that the yellow, Italian bee is a mountain insect; it is found between two mountain chains, to the right and left of Lombardy and the Rhetian Alps, and comprises the whole territory of Tessir, Veltlin and South Graubunden. It thrives up to the height of 4500 feet above the level of the sea, and appears to prefer the northern clime to the warmer, for in the south of Italy it is not found.

It differs from our common black bee in its longer, slender form, and light chrome-yellow color, with brimstone-colored wings, and two orange-red girths, each one-sixth of an inch wide. Working bees as well as drones have this mark. The drones are further distinguished by the girths being scolloped, like the spotted water-serpent, and attain an astonishing size; almost half as corpulent again as the black drones. The queen has the same marks as the working bees, but much more conspicuous, and lighter; she is much larger than the black queen, and easy to be singled out of the swarm on account of her remarkable bodily size and light color.

We engaged with Mr. Brackett in some manipulations, such as taking out the queen bee and a drone or two for examination, and peeping into some of the nuclei which he is forming.

For the New England Farmer.

CEMENT PIPE FOR CONDUCTING WATER.

MR. EDITOR:—In reply to a subscriber in your paper dated June 23d, 1860, I would say I have had considerable experience in cement pipe, having been in the business, more or less for the last three years. I laid down over 100 rods last year at East Fairfield, Vt., where the pressure was over 100 feet, and let it lay six months, and it will hold any pressure, when laid carefully, and large enough. It can be afforded from 50 cents to $1,25 cents per rod, according to the pressure, and the time that you keep the water off. It can be let on, where there is no pressure, in one week, and I can lay it just as it is wanted, large or small. It is very smooth, looking like polished stone when in the ditch, and as round as a stove-pipe, having moulders for the purpose. The water is as good as at the fountain. We have used it two years now, so I know something about it. Lead, when laid down, is apt to be more or less poisonous, according to the kind of water that runs through it; but cement is not. I think the time is not far distant when there will be more cement laid for fetching water than logs, or lead, or anything else; for there is no one that ever knew of its ever wearing out; nor indeed can it, for it becomes like a stone. J. CONVERSE.

Bakersfield, Vt., July, 1860.

SOFTENING OF THE BRAIN.—Professional, but more frequently business men, are its subjects. The predisposing cause is sumptuous living. After a morning fully occupied with business matters, a man comes regularly to a dinner of various and highly-seasoned dishes of fish and fowl and flesh, with every adjunct to excite and gratify the appetite. He partakes freely of food and wine, in excess to be sure, though perhaps never to the extent of gluttony or inebriety. The papers are read, cigars are smoked, a few hours are passed socially, and the evening closes with a hot supper, and abundant punch. If a man living thus continues successful in his plans and his business, he may go through life with no other physical or

mental infirmity than the pain and irascibility of gout or the distress and gloom of dyspepsia. But if it be otherwise, if he meet with a reverse of fortune, or if some grief or chagrin come upon him, then he is exceedingly liable to this fatal disease, which is the joint product of luxurious living and some torturing anxiety or disappointment.—*Report of Dr. John E. Tyler, Superintendent of the McLean Asylum.*

EXTRACTS AND REPLIES.

CORN AFTER RUTA BAGAS—MUCK AND ASHES COMPOST—WIRE-WORMS.

We, farmers, take for granted that you of the agricultural press are pleased and able to answer all questions on farming that we choose to put. Here are a few.

Neither corn nor tobacco will grow after ruta bagas. Why not? What will?

What is the *modus operandi* of composting muck with lime or ashes?

Is there anything to prevent the ravages of the wire-worm? No method which I have seen given will do it—they continue their ravages now by eating into and destroying the full grown stalk. They are often in muck grounds in great numbers, and in composting muck is there not danger of introducing this pest when the muck pile is spread? T. M.

South Hadley, July, 1860.

REMARKS.—You inquirers will find that you can ask a thousand questions which we "of the agricultural press" cannot answer, even were we as wise as we may think ourselves.

We can raise corn after ruta bagas, and so can you, by putting on manure enough. The bagas are great robbers, and the land must be highly fed after a crop of them. If tobacco will not grow after ruta bagas, we are quite satisfied—it ought not to be cultivated anywhere. You may follow ruta bagas successfully with any other crop, we think, by heavy manuring—at least, we find no difficulty in doing so.

For suggestions in relation to composting muck with lime or ashes, see Patent Office Report for 1856, pages 192, 193. We will endeavor to give an article on that subject in the course of a few weeks.

We have rarely seen wire worms in muck, and do not think there is danger of introducing them in it.

HOW TO USE LIQUID MANURES.

Will you, or some of your friends, through the medium of the *Farmer*, inform me how liquid manure can be best applied to plowed fields, whether it is best poured on to heaps of compost and hauled with the compost, or applied in some other way?

Northfield, Aug., 1860. INQUIRER.

REMARKS.—If you can obtain a plenty of muck by hauling it one mile or less, it will prove the best absorbent we know of to receive liquid manure, and when thoroughly saturated with them, will form one of the best fertilizers for top-dressing that is used. The liquid may be applied by horse power through a sprinkler, but they are expensive, and can be used only for that single purpose. If the muck is on hand, and is dry, it may be composted at any moment when the liquids have accumulated, and the heap thrown aside for use whenever it is convenient to use it. We believe the value of the muck, of itself, will more than pay the cost of carting it in and out again, especially if it is to be used on sandy lands.

CURE FOR HEAD MURRAIN.

I have long thought that your pleuro-pneumonia or cattle disease is nothing more nor less than the head murrain. This disease begins at the roots of the tongue, and runs from thence to the lungs, and thus destroys the vital parts. It can easily be ascertained by any one whether I am correct or not, by feeling of the throat near the roots of the tongue of the animal diseased, and ascertaining whether there is an enlargement there or not; if this is the case with the affected cattle in your vicinity, I think I could cure them for twenty-five cents per head.

My method in curing cattle troubled with the head murrain is, to cut a slit under the throat as near as possible to the roots of the tongue. Cleave off the skin from the flesh and crowd in a quantity of fine salt. When this becomes dissolved, put more salt into the slit, and continue to do so as long as the yellow matter will run. Cattle well attended to may be cured in a week. Taken early, four or six doses of salt will generally answer. JOHN CONN.

Salem, Vt., Aug., 1860.

VERMIN ON CATTLE.

My cattle last spring and now are troubled with black lice. I would like to ask through your valuable paper (which I commenced taking last spring) the best and safest way of getting rid of them?

Also, if lice will remain in a barn from the spring to the next fall so as to trouble cattle, and if so, the cheapest and best method of destroying them?

A NEW SUBSCRIBER.

Romney, N. H., Aug., 1860.

REMARKS.—We have rarely known simple oil of any kind, lard oil, sweet oil, or even common lamp oil, fail to destroy lice on cattle if judiciously and persistently applied. It must be added a little at a time, and rubbed in upon every part with patient perseverance. If this *does* fail, a little unguentum, rubbed on in the same way, will bring the desired result. Do it, however, in mild weather, and see that the cattle are not exposed to cold winds or storms for a few days succeeding its use.

CURE FOR HOLDFAST IN CATTLE.

I notice in your last monthly information is wanted by N. Mathews, of Henniker, N. H., in reference to the cure of a hard substance called holdfast, on the jaw of a valuable steer. If it is the same thing as we call a wen (which no doubt it is) it may be cured in the following manner: take good soft soap, any desirable quantity, put with the same about half the quantity of fine salt; heat the mixture and apply warm; rub it in once a day, or oftener, if convenient, and the bunch will soon disappear. The same will cure the horn distemper by applying it very hot to the hollow, back of the head. I know it from experience.

Ripton, Vt., Aug., 1860. A. A. ATWOOD.

RHUBARB WINE.

I saw a receipt in your last paper for making rhubarb wine. Can you give the best time for making it?

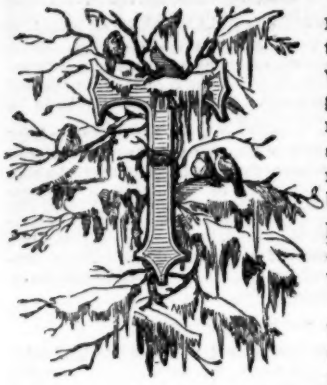
Springfield, Aug., 1860. READER.

REMARKS.—Mr. ASA CLEMENT, of Lowell, Mass., will tell you all about it. We do not know.

THE SCHOOLMASTER'S DIFFICULTY.—A country dominie had a hundred boys and no assistant. "I wonder how you manage them," said a friend, "without help." "Ah," was the answer, "I could manage the hundred boys well enough; it's the two hundred parents that trouble me—there's no managing them."

FARMING AS AN AVOCATION.—We welcome to our columns again, with pleasure, our old correspondent, "R. B. H.," of Amherst, Mass., and hope that now his pen is on the wing again, he will direct his flight this way often.

FACTS FROM THE CENSUS.



THE taking of the census, which is now going on, is revealing some facts in regard to the business and population of New England which seem considerably to surprise some of our people. By this census, the fact is made apparent that the population of a considerable number of the agricultural towns in New England has decreased since the taking of the last census, in 1850. This fact will be considered by some without connection with other facts, and will be taken as evidence of decay, and that farming is not a profitable employment.

When the full returns of these towns are before us, so that we can see whether the decrease of population is followed by a corresponding decrease of agricultural products and taxation in the town, we shall examine them with interest, and hope to turn to the subject again. In some cases, the valuation of the town will undoubtedly become less with the depreciation in the population—but they will be those rocky and mountainous regions that never ought to be used for any thing but the forests which they produce, and the pasturage which may be made to succeed them by burning the refuse wood after the timber is taken away.

After taking off the timber from a township of land, and manufacturing it into valuable articles for domestic or foreign uses, and then cropping the same soil several years with rye, or depasturing it with herds of cattle or flocks of sheep, the leaving it to grow up to forest again is no evidence to us that the people who have occupied it have lost their energies, or are any the less thrifty than those of other towns who still remain and cultivate the soil. Let it alone, and the earth will recuperate itself, so that many a young man, who now leaves only barren hills, will live to return and find them clothed with an ample crop of timber from which he may carve out a fortune. It would be an evidence of bad judgment and unthrift, if they should remain upon the barren hills and attempt their cultivation, when there is an abundance of land richer in fertilizing agents and so much more easily wrought.

A writer in the *Boston Journal*, dating at Warren, N. H., in the valley of Baker's River, makes some statements in point. His letters are quite interesting. He says the population of the town of Warren has increased 322 since 1850, but gives as a local cause, the existence of a copper and lead mine in the eastern part of the town, which continues to be successfully worked. The land is favorable for grazing, so that large quantities of butter and cheese are made, and "more maple sugar is made here than in any other town in the State, the amount last spring having been *eighty-five thousand pounds!*"

The population of Wentworth has decreased, which the writer ascribes to a local cause—there has also been a decrease in the towns of Orford, Dorchester and Lyme. The writer adds, "it is probable that the census of nearly all the purely agricultural communities in New Hampshire will show a falling off in population during the last ten years, the gain, if there has been any, having been in the manufacturing places." Although the population in the town of Lyme has decreased, its wealth has increased. The letter referred to, states that it is one of the richest agricultural communities in the State, and probably has more sheep than any other, the number now owned in the town being from twelve to thirteen thousand. The production of wool this year is estimated in value at $25,000. The farmers raise all the wheat which is used in the town. We doubt whether there is another town in New England which can say the same.

These remarks sustain the views we entertain, and have more than once expressed, in regard to the depreciation of population in our rural towns being an evidence of the unprofitableness of farming as an occupation. We find in these instances that where the land is in a favorable position, and the soil is fertile and of easy cultivation, the labor of the husbandman is abundantly rewarded. The township of Lyme lies on one bank of the Connecticut river, and a considerable portion of the land is rich, and may be cultivated with ease. The town of Dorchester lies upon the hills, and quite likely a considerable portion of it which is devoted to farm purposes would be found more profitable in the end if it were left to go back to forest again. A portion of the township of Orford lies on the same river, but if we mistake not, a much larger portion upon the hills.

The reason, then, of this depreciation of population in the rural towns, whatever else it may be, is not that the farmers of New England manage their business with less interest or skill than formerly, or that the occupation itself receives less consideration, but that it springs from natural causes:

1. That, aided by a better knowledge of the Art of Husbandry, and by better varieties of

plants and breeds of stock, a better knowledge of the modes of securing them through the winter, and the advantages derived from the use of labor-saving machinery, vastly more is produced than formerly on the same extent of land.

2. Farmers have found that mountainous and rocky lands, remote from markets that demand vegetables and grains, are more valuable for timber which they will produce once in twenty to forty years, than to be devoted to any other purpose—and that in nearly all cases, the moist low lands are the best adapted to cultivation.

3. The forests of the hills being cut off for manufacturing purposes, the persons living in their vicinity are naturally called upon to aid in the process of the manufacture of innumerable articles of convenience and value that find their way into the remotest regions of the earth. So that it is neither a want of perception, nor decaying energies that prompt them to leave the farm, but an intelligent foresight that induces them to engage in some remunerating employment, while nature in her steady processes of beneficence recuperates the soil and restores the crops which man had exhausted for his convenience and comfort.

HAY FOR ONE SHEEP.

In reply to the question, How much hay will a sheep consume during the winter months, the Michigan *Farmer* remarks as follows:

"The usual rate of the consumption of food is at the rate of 3½ pounds of hay daily for every 100 pounds of live weight. If we take the average of flocks the live weight of 100 common sheep would be about 7500 pounds, or from that up to 8000. It is rare that a whole flock of fine wooled sheep will average more than 70 pounds for each head, though it may be that this weight is exceeded in some instances. At the rate mentioned, a flock of 100 sheep should use up or consume 280 pounds of hay per day, or a total of 25 tons in the winter season that lasted 180 days. This would also equal 504 pounds to each single sheep, or it may be stated as a general rule that a full grown Merino sheep averaging in live weight from 75 pounds to 100, will consume during the winter season a quarter of a ton of hay, or its equivalent, if comfortably kept. If grain forms a part of the ration, of course some of the hay may be saved; but if the animal is to be kept growing wool, it will need its full ration of hay, and a little grain, too."

AGRICULTURAL PAPERS.—The following testimony of Horace Greeley to the value of agricultural papers, we presume will have weight even where his political opinions would be deemed heretical:

"There are at present some fifty or sixty periodicals published in our country devoted to farming—as many, I presume, as in all the world beside. They have been built up at great expense of talent, labor, and money; for when Col. Skinner started the first of them at Baltimore, some forty or fifty years ago, the idea of teaching farmers anything in *that* way was hooted by them as ridiculous, and he found it hardly possible to give his early numbers away. Hundreds of thousands of dollars have been spent on these publications; and they are this day, in my judgment, doing more to promote the true growth of the country and the substantial, enduring welfare of our people, than Congress, the Army and the Navy, for the support of which they are taxed some forty millions per annum."

SUMMER PRUNING OF FRUIT TREES AND THE VINE.

A system of pinching off the shoots of trees in the growing season, is gaining favor constantly; as yet, however, it is only followed, so far as we have observed, by gardeners bred and by amateurs. It is anticipating pruning, by preventing the growth of any thing to be removed in pruning; hence it is performed on the same principles as pruning, that is, to accomplish the same ends by similar means.

It has many advantages over pruning, as may be readily perceived, especially in directing growth, and checking it so as to secure perfect maturity of the young wood. It is performed by pinching off between the finger and thumb, especially making use of the thumb-nail, shoots as soon as they pass the fixed limit. It may be performed throughout the growing season, but in some cases, too early pinching causes an undesirable growth of lateral branches, while in the proper season, this same growth of laterals is what makes the practice so useful in directing growth, and forming the branches exactly to suit the orchardist.

Barry quotes Dubreuil at considerable length, and we give the heads under which the objects of pruning are classified:

I. The vigor of a tree, subject to pruning, depends, in a great measure, on the equal distribution of sap in all its branches. This may be done by the following means:

1. Prune the branches of the most vigorous parts very short, and those of the weak parts long.

2. Leave a quantity of fruit on the strong part, and remove the whole, or greater part, from the feeble.

3. Bend the strong parts; keep the weak erect.

4. Remove from the vigorous parts of the superfluous shoots as early in the season as possible, and from the feeble parts as late as possible.

5. Pinch early the soft extremities of the shoots on the vigorous parts, and as late as possible on the feeble parts, excepting always any shoots which may be too vigorous for their position.

6. Lay in the strong shoots on the trellis early, and leave the feeble parts loose as long as possible.

7. In espalier trees, giving the feeble parts the benefit of the light, and confining the strong parts more in the shade, restores a balance.

II. The sap acts with greater force, and produces more vigorous growth on a branch, or shoot pruned short, than on one pruned long.

III. The sap tending always to the extremities of the shoots, causes the terminal bud to push with greater vigor than the laterals.

IV. The more the sap is obstructed in its circulation, the more likely it will be to produce fruit buds.

V. The leaves serve to prepare the sap absorbed by the roots for the nourishment of the tree, and aid the formation of buds on the shoots. All trees, therefore, deprived of their leaves, are liable to perish.

VI. Where the buds of any shoot or branch do not develop before the age of two years, they can only be forced into activity by a very close pruning, and in some cases, as the peach, this even will often fail.

ADVANTAGES OF SMALL FARMS.

It has always been a question among political economists, whether large or small farms were most advantageous to the State. Without undertaking to settle the controversy, we will make an interesting extract in relation to this point, from the Abbe St. Pierre, who thought that the laws ought to prescribe bounds to the accumulation of landed property. The reader will observe that his inquiry is, as to which "is most advantageous to the State?" We presume that in the matter of agriculture, what is the best for individuals will prove to be the best for the State.

Whether a man can manage a large, or a small tract of land to the best advantage will usually depend upon two things,—*capital* and *skill*. If he possesses enough of these, why should he not manage a thousand acres as well as one hundred, in a country like ours, where land is abundant?

As a general thing, however, with the resources that our New England farmers possess, we have no doubt that a larger per centage is realized on moderately small farms, than on large ones. The Abbe says:—

The Romans had censors, who limited, in the first instance, the extent of a man's possessions to seven acres, as being sufficient for the subsistence of a family, *understanding by an acre as much land as a yoke of oxen could plow in one day*. As Rome increased in luxury, it was extended to five hundred acres; but even this law, though indulgent in the extreme, was soon infringed, and the infraction hastened rapidly the ruin of the republic. "Extensive parks," says Pliny, "and large domains, have ruined both our own Italy and the provinces which the Romans have conquered; for the victories which Nero, (the consul,) obtained in Africa, were simply owing to the circumstance of six men being in possession of nearly one-half of Numidia." Plutarch informs us, that in his time, under Trajan, a levy of three thousand men could not have been effected in all Greece, which had formerly furnished armies so numerous; and that sometimes you might have travelled a whole day, on the high-roads, without meeting a human being except now and then, perhaps, a few solitary shepherds. The reason was that Greece had been parcelled out among a few wealthy proprietors. In countries where property is so unequally divided, conquerors have always met with a feeble resistance. We have examples of this in all ages, from the invasion of the lower empire by the Turks, to that of Poland, in our own days. Overgrown estates destroy alike the spirit of patriotism, in those who have every thing, and in those who have nothing. "The shocks of corn," says Xenophon, "inspire those who have raised them to defend them. They appear in the fields as a prize exhibited in the middle of the theatre, to crown the conqueror."

Such is the danger to which the great inequality of property exposes a state from without: let us view also the mischief which it occasions within. An old comptroller-general having retired to his native province, made a considerable purchase in land. His estate was surrounded by about fifty small manors, the annual rent of which might be from sixty to eighty pounds sterling each. The proprietors were honest country gentleman, who for many generations had furnished their country with gallant officers, and respectable mothers of families. The comptroller-general, desirous of extending his lands, invited them to his castle, entertained them magnificently, gave them a taste of Parisian luxury, and concluded with an offer of twice the value of their estates, if they thought proper to dispose of them. The guests, to a man, accepted his offer, imagining they were about to double their revenue, and filled too with the hope, no less fallacious to a country gentleman, of securing a powerful protector at court. But the difficulty of placing out their money to advantage, a taste for expense, occasioned by the possession of sums which they had never before seen in their coffers, and frequent journeys to Paris, soon reduced the price of their patrimony. By degrees these respectable families disappeared; and thirty years after, one of their sons who could reckon among his ancestors a long succession of captains of dragoons, and knights of St. Louis, was found wandering on foot over his paternal inheritance, soliciting the place of a keeper of a salt office, to keep him from starving.

Such is the evil inflicted on the citizens by the accumulation of many estates in the hands of a single proprietor; and the injury done thereby to the land itself is not the less to be deplored. I was some years ago, at the house of a gentleman in affluent circumstances, in Normandy, who cultivated himself a very considerable grass farm, situated on a rising ground, of a very indifferent soil. We walked together round his vast enclosure, till we came to a large space completely overrun with mosses, horsetail and thistles. Not a blade of good grass was to be seen. The soil indeed was at once ferruginous and marshy. He had intersected it with many trenches to drain off the water, but all to no purpose: nothing would grow. Immediately below there was a series of small farm-houses; the land belonging to them was clothed with grassy verdure, planted with apple trees that were loaded with fruit, and enclosed with tall alders. The cows were feeding among the trees of the orchards, while the country girls sat at the doors of their houses, with their spinning wheels, singing as they worked. Their rustic and simple lays, repeated from distance to distance, under the shade of trees, communicated to this little hamlet a vivacity which increased the de-

pressing solitude of the spot where we stood, and I asked its possessor how it happened that lands so contiguous should present so different an aspect? "They are both of the same nature," said he, "and there formerly stood upon this very spot, small houses, similar to what you see below. I purchased them, but greatly to my loss. Their late inhabitants, indeed, having an abundance of leisure, and but little ground to cultivate, cleared away the mosses and the thistles, manured the soil and had a plentiful crop of grass. If they wished to plant, they dug trenches, and having removed the stones, filled them with good mould which they collected from the bottom of the ditches, and along the sides of the highway. Their trees took root and prospered. But these operations would cost me so much time and expense, that I should not be repaid even the common interest of my money." This gentleman, it must be observed, wretched steward as he was, but excellent in heart, was relieving at that very time, by his charity, most of the ancient farmers who had no longer wherewith to live. Here, then, is another instance of both men and lands rendered useless by the injudicious extension of property. It is not upon large domains, but in the bosom of industry, that the Father of mankind pours out the precious fruits of the earth.

For the New England Farmer.

RAISING GRAIN---CORN---PICKLES.

MESSRS. EDITORS:—Some of your readers may be interested in the subject of raising grain, and as I have had considerable experience in the matter, I will state a little of it. It is thought that oats sometimes changes to rye or barley, or barley to oats, and your columns have contained some inquiries concerning it.

My first experiment was with barley. I selected the seed from a lot where oats were mixed with it, sowed it in rows in the garden, and had a fine crop of barley, but not an oat appeared. My next experiment was with oats. I sowed a strip about four rods square, and mowed it as directed in an article which I saw in the *Farmer*. I also sowed clover and herdsgrass seed with the oats, both of which caught well, and finally gave me a fine crop of grass, but not a spear of rye has showed itself. I cropt the oats off several times, supposing that would have an influence to change the crop, according to the theory of those who state that these grains change from one to the other.

My opinion about this matter is, that if grains are sown separately, that like will always produce like.

I had a small parcel of corn in the spring which was brought from Peru. It has been planted now nine weeks, in a garden without extra manure, and it averages five and a half feet in height.

I send you a jar of pickles put up last season; they are not quite as good as they would have been had they not got a little chilled in the cellar last winter; but I hope they will prove both acceptable and palatable. HENRY J. DURGIN.

Shaker Village, N. H., 1860.

REMARKS.—The jar was safely received, and its contents pronounced "excellent," by all who tested them.

LADIES' DEPARTMENT.

SLEEP.

There is no fact more clearly established in the physiology of man than this, that the brain expends its energies and itself during the hours of wakefulness, and that these are recuperated during sleep; if the recuperation does not equal the expenditure, the brain withers—this is insanity. Thus it is that in early English history, persons who were condemned to death by being prevented from sleeping always died raving maniacs; thus it is, also, that those who starve to death become insane; the brain is not nourished, and they cannot sleep. The practical inferences are these: First, Those who think most, who do the most brain-work, require most sleep. Second: That time saved from necessary sleep is infallibly destructive to mind, body, and estate. Third: Give yourself, your children, your servants—give all that are under you, the fullest amount of sleep they will take, by compelling them to go bed at some regular early hour, and to rise in the morning the moment they awake; and within a fortnight, nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system. This is the only safe and sufficient rule—and as to the question how much any one requires, each must be a rule for himself—great Nature will never fail to write it out to the observer under the regulations just given.—*Dr. Spicer.*

A WORD TO MOTHERS.—Consider it your religious duty to take out-door exercise, without fail, each day. Sweeping and trotting round the house will not take its place; the exhilaration of the open air and change of scene are absolutely necessary. O, I know all about "Lucy's gown that is not finished," and "Tommy's jacket," and even *his* coat, his buttonless coat, thrown in your lap, as if to add the last ounce to the camel's back; still I say—up—and out! Is it not more important that your children in their tender years should not be left motherless? and that they should not be born to that feeble constitution of body which will blight every earthly blessing? Let buttons and strings go; you will take hold of them with more vigor and patience, when you do return, bright and refreshed, and if every stitch is not finished, at just such a moment, (and it is discouraging not to be able to systematize in your labor, even with your best efforts,) still remember that "she who hath done what she could, is entitled to no mean praise. Your husband is undoubtedly the "best of men;" though there are malicious people who might answer that that is not saying much for him! Still, he would never to the end of time, dream what you were dying of. So accept my advice and take the matter in hand yourself.—*Fanny Fern.*

CAMPHOR is the most powerful agent to drive away mosquitoes. A camphor bag hung up in an open casement will prove an effectual barrier to their entrance. Camphorated spirit applied as a perfume to the face and hands will act as an effectual preventive; but when bitten by them, aromatic vinegar is the best antidote.

DOMESTIC RECEIPTS.

PEACH PRESERVE.—A lady of Philadelphia, whose peaches keep beautifully and retain much of their delicious flavor, takes half a pound of sugar to each pound of peaches. The sugar is put into a preserving-kettle, with half a pint of water to every pound of sugar, heated, and the surface skimmed. Into this syrup the peaches, after being pared, are placed, and boiled ten minutes. The peaches are then put into the cans while hot, and immediately sealed up.

COMPOTE OF PEACH.—Pare half a dozen ripe peaches, and stew them very softly from eighteen to twenty minutes, keeping them often turned in a light syrup, made with five ounces of sugar and half a pint of water boiled together for ten minutes. Dish the fruit; reduce the syrup by quick boiling, pour it over the peaches, and serve them hot for a second-course dish, or cold, for dessert. They should be quite ripe, and will be found delicious dressed thus. A little lemon-juice may be added to the syrup, and the blanched kernels of two or three peach or apricot stones.

BLACKBERRIES.—Preserve these as strawberries or currants, either liquid, or jam, or jelly. Blackberry jelly or jam is an excellent medicine in summer complaint or dysentery. To make it, crush a quart of fully ripe blackberries with a pound of the best loaf sugar; put it over a gentle fire, and cook it until thick; then put to it a gill of the best fourth-proof brandy; stir it for awhile over the fire, then put it in pots.

BLACKBERRY SYRUP.—Make a simple syrup of a pound of sugar to each pint of water; next boil it until it is rich and thick; then add to it as many pints of the expressed juice of ripe blackberries as there are pounds of sugar; put half a nutmeg grated to each quart of the syrup; let it boil fifteen or twenty minutes, then add to it half a gill of fourth-proof brandy, for each quart of syrup; set it by to become cold; then bottle it for use. A table-spoonful for a child, or a wine-glass for an adult is a dose.

BLACKBERRY WINE.—The following is said to be an excellent receipt for the manufacture of superior wine from blackberries; Measure your berries and bruise them, to every gallon adding one quart of boiling water: let the mixture stand twenty-four hours, stirring occasionally; then strain off the liquor into a cask, to every gallon adding two pounds of sugar; cork tight and let stand till the following October, and you will have wine ready for use, without any further straining or boiling, that will make lips smack as they never smacked under similar influence before.

BLACKBERRY CORDIAL.—We avail ourselves of the kindness of a friend to publish the following excellent receipt for making cordial. It is recommended as a delightful beverage, and an infallible specific for diarrhœa or ordinary disease of the bowels:

Receipt.—To half a bushel of blackberries, well mashed, add a quarter of a pound of allspice, two ounces of cinnamon, two ounces of cloves; pulverize well, mix and boil slowly until properly done; then strain or squeeze the juice through homespun or flannel, and add to each pint of the juice one pound of loaf-sugar; boil again for some time, take it off, and, while cooling, add half a gallon of best Cognac brandy.

Dose.—For an adult half a gill to a gill; for a child, a teaspoonful or more, according to age.—*Godey's Lady's Book.*

YOUTH'S DEPARTMENT.

OLD MARCO, THE TAME BEAR.

A nobleman in France had an old bear named Marco, which he kept in a little cabin built inside his barn. The winter of 1709 was a very severe one, and many poor people almost froze to death. Some peasants were accustomed to come into the barn to sleep, and among them was a little child, who, seeing Marco had a snug nest, crept in to share it with him. Old Bruin was not accustomed to such liberties taken with his dignity, but he seemed to take the matter kindly, and instead of injuring the little intruder, he took him tenderly between his paws, and hugging him up to his shaggy breast, kept him warm and comfortable till morning. It was a nicer bed than he had slept in for many a night, and when evening came again he returned to his new lodging, where he found old Marco glad to see him, and again went to sleep in his great paws. While he slept the bear never stirred, lest he should disturb him, and after this, he saved part of his supper for his hungry little friend, who was very thankful to the kind old bear. The friendship continued till the little boy's death, when Marco grieved for him a long time, scarcely taking any food.

The white bear lives in the cold northern regions, where vast numbers of them are found, in proportion to the other animals of that locality. They are sometimes found floating on a fragment of ice a long distance from land; and then, if the boat of a poor Greenlander chances to come quite near, a bear will sometimes spring into it, and if the boat is not capsized, he sits down quietly like any other passenger, and allows himself to be rowed to land, when he walks off without stopping to pay his fare.

A LITTLE boy three years old was blessed with a new little sister. The day following he was required to be very still, and the reason given therefor, that his mother was very weak, and his sister too. He obeyed the injunction carefully. In the course of the day, some playmates came to the house; he rushed to the door, and putting his little finger up to check their noise, said, "Be very quiet—I have got a little baby sister, and she is very weak and tired—for she has walked all the way from Heaven to-day, and you must not disturb her."

THE spaces of the Solar System, or some of them at least, appear to be thickly peopled with small planets or asteroids, invisible to the naked eye or by the ordinary telescope. No less than forty-seven of these young planets are now known to exist between Mars and Jupiter, and every few months we hear of a new discovery. The largest of them is said to be only forty miles in diameter, and the smallest only four.